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ABSTRACT

Historical perspectives on nonformal education are examined in this report which is one of a series on nonformal education. Background information for the series is included in document SO 008 058. Chapter 1 relates nonformal education to the concept of development now held by such international assistance agencies as the World Bank and UNESCO. Chapter 2 summarizes recent efforts to expand and reconstruct the concept of development. Chapter 3 examines the theoretical basis for historical patterns in educational history. Chapter 4 analyzes the impact of cultural evolution on educational formalization and includes the impact of elites, ideological uniformity, symbolization of behavior, and management of surplus energy. Chapter 5 discusses the relationship between ways in which people are accustomed to learn and the ways in which teaching is conducted. The sixth chapter examines the work of Paul Goodman and the impact of civic and occupational life on educational arrangements. Chapter 7 analyzes the work of Marshall McLuhan and how patterns of perception form cognition and how cognitive styles determine cultural character. Chapter 8 reviews Ivan Illich's concept of "deschooling" or returning educational activities to their functional roots. The ninth chapter examines Paulo Friere's idea of using nonformal education to raise consciousness and free the oppressed. The final chapter presents the author's conclusions in regard to the previous chapters. (DE)

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Program of Studies in Non-formal Education

Team Reports

HISTORICAL PERSPECTIVES

ON

NON-FORMAL EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

The Michigan State University Program of Studies in Non-formal Education, made possible by the Agency for International Development, has two primary objectives: to build a systematic knowledge base about non-formal education, and to apply knowledge through consultation, technical assistance, workshops, and the distribution of useful materials in developing areas of the world.

This series of Team Reports is directed at the first objective, knowledge building. The series consists of the final statements of nine teams of faculty members and research fellows, each working on a separate aspect of non-formal education for a substained period of time. The reports range widely over non-formal education. They deal with its history, its categories and strategies, economics, and learning. Other reports made comparisons among country programs, survey case studies, examine the feasibility of designing non-formal education models, look at administrative alternatives and draw plans for participant training in non-formal education.

The teams were cross-disciplinary in composition, representing such areas as economics, labor and industrial relations, political science, public administration, agricultural economics, sociology and education. Together, members of the teams produced nearly one hundred working papers, many of which were shared and debated in three series of semi-weekly seminars for all project participants. The working papers, copies of which are available upon request, provide the basic ideas for the reports in this series.

In the interest of the freest possible exploratoration each team was encouraged to range widely over its domain and to develop its own set of conclusions and recommendations. Coordination was achieved through the common seminars and the exchange of data and experience. A summary volume, pulling together and synthesizing the main thrusts of all the team reports in this series, is being prepared under the editorship of Marvin Grandstaff. Like the working papers, the summary volume will be available for distribution.

In line with our first objective (knowledge building) the papers in this series are conceptual in nature. In the pursuit of knowledge, however, we have tried to keep one question steadily before us: what assistance does this knowledge provide to those whose primary concern is with action--the planning and implementing of non-formal education at the level of practice? That question isn't easily answered. At best our knowledge is partial and it needs the experience dimension to make it more complete. For thought and action are not antithetical; they are necessary complements. One of our hopes is that this series of team reports may help to stimulate further dialogue between those who approach the subject of non-formal education from a conceptual point of view and those whose questions and problems arise in the exigencies of practice.

What is the role of non-formal education in future development planning? As these reports suggest, it is probably great, and will be even greater through future time. The limitations of formal schooling are coming to be better understood. As the Faure report concludes, the schools "will be less and less in a position to claim the education functions in society as its special perogative. All sectors-public administration, industry, communications, transportation must take part in promoting education. Local and national communities are in themselves eminently education institutions".

The non-formal education component of most societies is strong, indeed frequently vigorous, and fully capable of further development and use. It is estimated that roughly half of the present educational effort in the developing countries is in the non-formal sector. Collectively, these programs exhibit characteristics indispensible to development. For example, they tend to arise in response to immediate needs; they are usually related to action and use; they tend to be short term rather than long; they have a variety of sponsors, both public and private; and they tend to be responsive to local community requirements. More importantly non-formal education shows strong

potential for getting at the human condition of those most likely to be excluded from the formal schools, the poor, the isolated, the rural, the illiterate, the unemployed and the under-employed, for being carried on in the context of limited resources, and for being efficient in terms of time and cost.

Clearly, attention given to designing new strategies for the development of this old and promising resource is worthwhile. Through this series we seek join hands with others who are attending to the development of non-formal education.

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March, 1974

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PREFACE

This volume is a report of inquiries and deliberations carried out under the general rubric of Historical Perspectives within the Michigan State University Program of Studies in Non-Formal Education. The major activity of the Historical Perspectives effort consisted in (1) a discussion and inquiry seminar involving several faculty members and graduate students, over the period of an academic year, and (2) individual studies carried out by faculty members and graduate students. In order to place the work reported here in context it is important to notice several things that shaped the work of the group.

1. *The bulk of the work on historical perspectives was carried out very early in the history of the Program of Studies.* The seminar was held during the academic year, 1971-72 and most of the individual studies were completed shortly thereafter. As a consequence, the activities of the people working on historical perspectives centered upon the kinds of general, highly conceptual and, often, taxonomic and definitional concerns that dominated the Program of Studies in its early development. We were deeply involved in trying to say "what non-formal education is," and in trying to locate conceptual and theoretical handles on its analysis, description and study. Although, as is pointed out later in this report, no satisfactory definitional and taxonomic conclusions were attained, a number of fairly interesting and promising theoretical approaches were developed by the historical perspectives group, and those are reported here.

2. *Most of the participants in the historical perspectives study found their initial impetus for involvement in the non-formal education project in an interest in the general problem of the demonstrated inadequacy of formal schooling to serve the entire range of educational needs of young people.* Put another way, the arena for the development of concern was primarily that of a recognition of the

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shortcomings of American schooling, rather than that of international educational development, even though continuous efforts were made to direct inquiry toward the latter arena. As a consequence of this, there was a focus upon schooling and education *per se* and, to an important extent, in the abstract, rather than upon immediate problems of planning and administration. (Not only did this pattern arise from the interests of the participants, but it seemed consistent with the overall objectives of the MSU Program, which had, in its working plan, allocated problems of planning, evaluation and administration elsewhere in the Program.) The recurrent effort of the study was to cast, in theoretical fruitful ways, a general approach (or approaches) to the problem posed by the limitations of schooling as an educational mode and that problem provided the integrative force that gives to this report whatever unity of purpose it contains.

3. *Most of the participants had their background of experience and academic training in one of the foundations of education area--educational history, educational philosophy, sociology of education or anthropology of education--and most of them could be more comfortably located in the category of "educational scholars" than that of "educational practitioners."* The context of educational scholarship provided the common ground on which the activities of the group were defined. In almost all cases, the development of problems and their discussion was initiated against the background and with the assistance of works in the foundations of education. This gives to this report an "abstract" or "conceptual" or "academic" tone. There is no apology for that tone offered here. It is mentioned only in order to forestall a response to the report based in its failure to "be practical," since "practicality" was never taken as a primary commitment by the historical perspectives study group. Furthermore, the study of historical perspectives was conducted by people who believe that, in the last analysis "nothing is more practical than a good theory," and certainly the consideration of non-formal education as a valuable conceptual tool in the study of education has considerable "practical" yield. Attention will be given in this report to making that yield explicit. The

important point is not whether theoretical approaches are practical, so much as it is the question of whether inquirers are to seek their direction for study in the problems of "practice" or in the problems of "conceptualization." This report is the result of taking conceptualization as the context within which problems were sought and defined.

4. *The primary body of literature for the study of historical perspectives on non-formal education was that provided by the work, over the past decade or so, of a cluster of scholars who have generated detailed and compelling critiques of formal schooling.* This group of writers and researchers, including but not limited to Paul Goodman, Ivan Illich, Paulo Friere, Edgar Friedenberg, John Holt, Christopher Jencks, James Coleman, Rosalie Cohen, Marshall McLuhan, George Leonard, Neil Postman, Charles Weingartner, Charles Silberman, Everett Reimer, Robert Dreeben and Colin Greer, has had much to say to educators generally and much of it has significance to problems of education and development. Most of the participants in the study came with substantial familiarity with that literature and, in most cases, at least a tentative commitment to the validity of the conclusions toward which it points. A recurrent concern of the historical perspectives group group was that literature and that point of view should be a strong injection into the overall activity of the MSU Program of Studies--that a concern that was fulfilled in some instances and not in others. The idea of non-formal education was not born at Michigan State University nor in the Agency for International Development, but in the crucible of the efforts of people, world-wide, to solve educational problems for which the schools have proven inadequate. That effort has a history and a set of collaborators that deserve a prominent place in any discussion of non-formal education. Those people occupy their deserved prominent place in this study. Indeed, the ideas of four of them, Goodman, Friere, Illich and McLuhan, receive individual and detailed coverage.

Procedures

This report represents, first, a summary of the aggregate deliberation of those who have been involved in the historical perspectives study. That task has been performed mostly by the principal investigator and, while it may not achieve the status of consensus, it does, we think, do justice to most of the issues and problems with which the participants grappled. Several of the individual studies were conducted as part of the seminar and developed and refined within the seminar context. In other cases, students whose scholarly interests seemed to conjoin with the concerns of the study were asked, by the principal investigator, to explore the ramifications of their scholarship for the problem of non-formal education as that problem was delineated within the context of the historical perspectives effort. This report, in this way, is able to include contributions from several people who, while not formally associated with the Program of Studies in Non-Formal Education, were, nonetheless, closely aligned with and aware of the concerns of the historical perspectives study group.

In the individual studies, attribution is made to the person or persons who had the major responsibility for the basic research for the study, even though several of the studies combine the efforts of other participants.

CHAPTER I

INTRODUCTION

The study of historical perspectives on non-formal education has been shaped, from the outset, by a rather simple supposition which, in turn, generates a pervasive problem. The supposition is this: an analysis of educational practices and arrangements over a wide variety of historical locations and times should display patterns of characteristic locations of similar educational functions. That is, given an educational function or objective that is common to several cultural or historical settings, we might expect that objective to be pursued in some characteristic or modal way. For example, if, in several different contexts, learning the skills necessary for non-mechanized agriculture is a recurrent objective, we would suppose that the location of that learning task might be roughly the same in each of those several contexts. Given at least some validity for the supposition, the problem then becomes that of trying to develop some general notions about the matching or fit between objective and location. Why is a particular characteristic location the one to which is assigned a particular educational objective? (This is the problem that, in other places, we have termed the problem of "location of function.")[1] This has proven to be a considerably more difficult task than, on first blush, it might appear, for several reasons.

First, the construction of a typology of educational objectives is a terribly complicated endeavor, especially if one is attempting to devise a typology that has the degree of clarity and comprehensiveness necessary to the formulation of reasonably defensible empirical statements. There are, to be sure, an almost unlimited number of educational typologies available, including the monumental, three volume effort of Benjamin Bloom and his Associates, *Taxonomy of Educational Objectives*.

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Most of them, however, are either polemic--that is, they are designed to delineate grounds for the holding of some particular value posture in regard to education, or merely descriptive--attempts to render a set of categories that, in application, are capable of providing labels for any educational events brought forward for categorization. Every descriptive typology of which we are aware is either too complex or too shot through with ambiguity of categories to make it amenable to the construction of lucid theory. (This is true of the several typologies that have been generated for the phenomenological field of "non-formal education." Most of the ones that have been constructed and discussed in the Michigan State University project have taken the form of multi-dimensional matrices. A close inspection of the several efforts shows that they are all flawed by the postulation of parameters that are not theoretically or consistently comparable. In no case can we find a matrix construction in which variation along one parameter is functionally related to variation along all other parameters. This does not mean that they are *descriptively* or heuristically or polemically useless. Indeed, several of them have demonstrated a considerable amount of utility in service to those sorts of ends. What it does mean is that, for the problem of location of function, they do not provide the basis for identifying the sorts of functional concatenations necessary for making statements of the order, "if objective (a), then choose location (l)." This is as emphatically true of the typologies developed in the attempt to deal with the location of function problem historically as it is of other typologies designed for different purposes.)[2]

Second, the problem of constructing typologies of objectives is, if possible, even less taxing than that of trying to devise a theoretically useful typology of educational locations or agencies (or "delivery systems"). This is especially true when a very broad net is cast for data, as it inevitably is in historical studies. One would think, for example, that "school" as a category is fairly clear-cut, stable and theoretically manageable and so, initially, it appears to be.[3] A more careful examination of discrete cases, however, raises the suspicion

that it is not that uniform across barriers of time and culture. Just as one case in point: in modern American society, school is, in most instances, an integral part of the cultural fabric, closely attuned to the most widely accepted and highly conventionalized norms and mores.[4] It is, in a real sense, a powerful instrument of conservatism. In a peasant society, on the other hand, the school may represent alien ideologies and practices and may be, in the perceptions of the group members and, perhaps, in actuality, an instrument of disruption or revolution.[5] The notion of "school," then, cannot be satisfactorily discriminated from other educational locations on the basis of the way in which the location operates within its cultural setting as a static or dynamic force. In a somewhat different case, we can find agencies that are, unequivocally, "schools" that, in one instance are publicly funded and, in others, privately funded and, in still others, funded by the clients themselves. We can find "schools" that are solidly within a formalized credentialling network and others that have little to do with the attainment of credentials. And so the difficulties persist. Here, too, our typologies contain flaws of ambiguity and failures of clarity that prove fatal to their theoretical application.[6]

The consequence of these typological difficulties--one that indicates a first major significance for planners and practitioners--is the conclusion that, at least at the present time, *a general theory of non-formal education is not within our grasp.* In the specific case of the location of function, the conclusion is that the problem cannot be resolved at a general level. This admission is not made happily but, on the other hand, it is not one about which we need to feel ashamed, since, to our knowledge, no satisfactory general theory of education or of formal education has been formulated and those are tasks to which any number of able theorists have turned their efforts over a very long period of time.[7] The significance alluded to above is simply this: in talking about, in planning and in implementing efforts made under the rubric of "non-formal education" we would be well advised to be very careful in the specification of contexts, objectives and arrangements. To begin with the question "what is non-formal education?" or "how can

we implement non-formal education?" is to begin at precisely the wrong end of the stick. Rather, we would be well-advised to come at non-formal education from the perspective of quite specific problems and to theoretize those problems to the extent that is (1) possible within our presently existing knowledge, and (2) useful in formulating solutions to the problems. (It should be noted that it is not intended to take a stand here on the controversy whether general theory in history or the social sciences is possible. There are, to be sure, strong arguments in favor of the view that, in some cases--in learning theory, for example--the shape of general theory is sufficiently clear to allow for the derivation of research hypotheses from it, with the continual refinement of general theory as an end-in-view. All that is maintained here is that, in relation to the ambiguous concept of "non-formal education" there is no sufficient ground, in the form of an adequate general theory, for even the derivation of hypotheses. Hypotheses can, at best, be sought in middle-range theories and, more likely, have to be constructed *de novo* on the inductive base of pretty tightly circumscribed clusters of data.)

Thus, instead of being able to say, as we had at one point hoped to do, that schooling, for example, is appropriate (in any thinkable case) for educational objectives a, b, c, etc., we find it necessary to surround whatever statements we are able to make with quite specific qualifications; i.e., "given historical, cultural, economic and political conditions a, b, c, etc., schooling is appropriate and so on."

For these reasons, this report is based not in the extension of early efforts to develop and apply a general theory of location of function, but, rather, on the presentation of a limited number of paradigms of location of function.[8] In each case, the major parameters of the paradigm will be specified, with no attention given to the question of whether the treatments can be reconciled consistently with one another. (In point of fact, they probably cannot.) The paradigms have been selected because they have interest and because they raise issues or provide insights that may, in the long run, be valuable in

constructing a better articulated and more refined answer to the architectonic question of how we can decide what a mena is best suited to the accomplishment of some particular educational task.

While the attempt to conceptualize non-formal education has provided the major focus for the inquiries reported here, some direction has also derived from the general shape of the problems being faced in the developing nations of the world--problems to which the notion of non-formal education is one response. The character of that direction will be discussed in the next chapter, prior to the presentation of historical paradigms.

NOTES: CHAPTER I

1. For discussions of the problem of location of function, see Marvin Grandstaff, "Are Formal Schools the Best Place to Educate?" and Cole S. Brembeck, "The Strategic Uses of Formal and Non-Formal Education," both in *New Strategies for Educational Development*, edited by Cole S. Brembeck and Timothy J. Thompson (Lexington, Mass.: D. C. Heath and Co., 1973), pp. 41-43 and 53-54. Also, *Non-Formal Education as an Alternative to Schooling*, Discussion Paper Number Four of the Michigan State University Program of Studies in Non-Formal Education.

2. Most of the typological work of the Michigan State University Program of Studies in Non-Formal Education is reported in Discussion Paper Number Two of the Program, *Non-Formal Education: The Definitional Problem*.

3. Discussion Paper Number Four, *op. cit.*

4. For discussions of the school as a cultural conservator, see Colin Greer, *The Great School Legend* (New York: Viking Press, 1973) and Marvin Grandstaff, "Schooling, Education and the Social Crisis," *Focus on Learning*, II(2):17-28 (Fall/Winter, 1972).

5. A classic account of the school as a disruptive influence on culture is Chenua Achebe's African novel, *Things Fall Apart* (New York: Astor-Honor, Inc., 1958).

6. Discussion Paper Number Two, *op. cit.*

7. Perhaps the most comprehensive effort to render a theoretization of formal education--and one that reveals clearly the range of problems involved, is John Dewey, *Democracy and Education* (New York: Macmillan and Co., 1934).

8. For an earlier presentation of an historical paradigm in the study of non-formal education, see the discussion of the American Common School Movement in Grandstaff, "Are Formal Schools the Best Place to Educate?" *op. cit.*

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CHAPTER II

NON-FORMAL EDUCATION AND AN EXPANDED CONCEPTION OF DEVELOPMENT

Introduction

The concept of "non-formal education" embraces an enormous number of diverse events and structures. Any attempt to study the substance of what is named by the concept is likely to be selective, either implicitly or explicitly. What is needed are ways to formulate explicit bases of selection and focus. One part of that effort is the general classification of the field--a task on which some progress is being made.[1] Another "handle" on the problem of selection consists in seeking grounds for focus that derive from the progress to which accumulated knowledge about non-formal education will be put. This paper takes the latter approach. I would like to suggest that *one* possible way to "target" inquiries into non-formal education is to relate the concept of non-formal education to the concept of development. More specifically, it is my contention that the emphasis on non-formal alternatives to formal schooling can be related to a major reconstruction of the concept of development now being carried out in international assistance agencies, such as AID, the World Bank and UNESCO, within the countries that are recipients of development assistance and within that portion of the academic community concerned with problems of development.[2]

If that is so, then efforts to study non-formal education and to plan and implement non-formal programs might acquire focus from a consideration of what development is coming to mean. Assuming that education is usually an instrument toward some more general social goal, rather than an end-in-itself, our study of it has clarity and usefulness to the extent that it is informed by an understanding of that toward

which it *is* an instrumentality. That proposition provides the rationale for this investigation.

Some Dimensions of a Focus for Non-Formal Education

In the paragraphs that follow, I will try to summarize and organize recent efforts to expand and reconstruct the concept of development and to examine the implications of that reconstruction for the systematic study of non-formal education. The bulk of the analysis here treats the conceptualization of "development" and its educational correlates, with the special problem of conceptualizing "non-formal education" regarded as much as a task to be undertaken as one accomplished. That program has necessitated a rather lengthy (and perhaps laborious) examination of the development concept, so that the reader may begin to wonder when, if ever, the topic of non-formal education is going to be discussed. Although I think that that is unavoidable, it may be helpful to state in advance the conclusions regarding non-formal education that will appear again later in the paper.

Any educational effort has a great many dimensions and any one dimension or set of dimensions can provide a possible way to construct a focus for inquiry. The problem of what dimensions to choose is always an important and difficult one. In this instance, the dimensions are drawn from a consideration of some of the most pressing problems that now exist in the development process. A cluster of seven variables is suggested here as a fruitful basis for inquiry into non-formal education.

1. Cost.--The importance of cost in educational planning and decision-making cannot be overemphasized. Even in the most developed countries there are limits to the amount of money that can be devoted to education, either in absolute terms or in terms of proportion of national wealth. It is suggested here that one appropriate way to focus on non-formal education is to emphasize the search for educational modes that couple effectiveness with low per capita instructional unit cost.

2. Program Duration.--Another program variable--and one that is closely related to both cost and effectiveness--is that of time duration. A significant desideratum of educational programs, especially those within the non-formal realm, is that they be of the shortest possible time duration and that they contain frequent completion points.

3. Basis in Need.--It is assumed of any educational program that is capable of winning support that it has some base in human need. The connection between education and need may, however, range from relations of clarity and immediacy to relations that are fairly obscure and based in very long-range projections of utility. While there is often a need for educational programs that proceed from obscure and long-range relations to human need, it is suggested here that a focus for non-formal education can be provided by giving primary emphasis to objectives that have a clear and immediate relationship to existing human need.

4. Aspirations of Participants.--Educational programs vary along the dimension of their provision for accommodation of the aspirations of their participants. Typologically, that variable may range from zero provision to total provision. Along that continuum, we can, in studying non-formal education, direct our attention to those cases that make the greatest provision for allowing the aspirations of the participants to function as powerful formative elements in program planning and design.

5. Linkage to Employment.--This is a special instance of the relationship between education and human need. It is selected for particular examination because the problem of employment is one of the most stubborn and pervasive ones encountered in the LDCs (and in developed countries). Employment is a major imperative in any development effort and it can provide an important focus for inquiry and planning in non-formal education.

6. Decentralized Planning and Alteration.--A common problem in education is that of built-in inflexibility, usually arising from centralization of planning. Although this may be inevitable in some kinds of educational efforts, it need not be so in all cases. Non-formal education provides an excellent conceptual rubric for educational approaches that maximize decentralization of design and planning and that provide for maximum alteration-in-use.

7. Distribution.--Finally, educational programs vary in terms of their distribution among potential audiences. Some have very limited distribution, while others are distributed to a wider clientele. Here, too, there are sometimes good reasons for programs of limited distribution. Current problems of development, however, seem to make it worthwhile to focus our consideration of non-formal education on programs and objectives that anticipate the widest possible distribution.

With that brief preview, let me move to the explication of the rationale for these seven points. Let me begin with a brief statement, to be elaborated further on, of what seems to be happening in regard to conceptualization within the development community.

Shifting Emphases in Development

Over the past twenty-five years or so, many of the developed nations and a number of international agencies have been involved in providing assistance to the efforts of the LDCs to improve their situations. Prior to, and during that experience, a general notion of what constitutes "development" emerged and formed the basis of strategy, practice and theory. The concept of development became, technically, a commonplace--a given and mostly unexamined component of thought and action. As usually happens in any human endeavor, funded experience has begun to demonstrate flaws and weaknesses in our commonplace conceptualization. Too, the passage of time and the flow of events alter situations, so that ideas that work at one point in time may prove inadequate at another. We now seem to have reached a juncture at which the inadequacies are sufficiently apparent to warrant the

reexamination of our conceptions and their reconstruction. That reconstruction is well under way, both within and without assistance agencies, even though it will surely be some time before the reconstruction is fully developed, and an even larger time before it becomes widely operational. Still, at this point, there are several things that can be said with a measure of certainty about the reconstructed conception of development.

In general, the shifting emphasis may be described as a heightened attention to the "humane," as against the "technical" dimension of development. This means, in most cases, an effort to improve the quality of the lives of the general populations in the LDCs. Central to the reconstruction of the concept is the recognition, as John Hannah has put it, of

> *the community of interest of all people in the world in the peoples of the poor countries who want to help themselves develop their own resources, human and material, to provide better lives for all of their people.*[3]

Somewhat more specifically, Mahbub ul Haq of the World Bank has suggested that

> *The problem of development must be redefined as a selective attack on the worst forms of poverty. Development goals should be expressed in terms of progressive reduction and eventual elimination of malnutrition, disease, illiteracy, squalor, unemployment and inequalities.*[4]

My purpose here is to give greater detail and specificity to the sort of expansion of the development concept that is implied by those statements and to use that analysis as a tool for constructing one possible focus for the study of non-formal education.

Limitations and Qualifications

Although I believe the relationship between non-formal education and an expanded conception of development to be a useful and important means of structuring inquiry and effort, I do not intend it as an exclusive means. There are, then, several significant qualifications, limitations and disavowals that must be made clearly.

First, the reference here is to efforts that arise from an interest in planning and practice, rather than those that proceed from an abstract interest in the problems and events of non-formal education. Put another way, the frame of reference here is educational effort that involves deliberate intervention for developmental purposes. The line between the "practical" and the "abstract" is, of course, never easy to draw and even to make the distinction is a little treacherous, since it is often made in order to argue for the superiority of one perspective or the other. I have no desire to degrade or elevate either sort of activity. I mean only to establish the context of these remarks as being the "practical" realm and to limit their relevance to a concern with practice. There are, to be sure, a great many dimensions of non-formal education, broadly conceived, that are of great interest, but which lie outside the planning area. Those dimensions merit attention and scrutiny, especially since, in a relatively new field of inquiry, work in areas that seem tangential may prove to have substantial and unexpected relevance. Our judgment of what is relevant is conditioned by the state of our knowledge. Where knowledge is only beginning to coalesce, those judgments are apt to be sometimes wrong or partial. To stipulate that this paper is bounded by some such phrase as "deliberate intervention for developmental purposes" should not be taken as an attempt to rule out of order inquiries for which a relationship to that phrase cannot clearly be established. The only purpose of such a qualification is to provide some focus and to pick out a manageable portion of a large and diffuse field.

Another important pair of qualifications has to do with the thrust of reconsidering the concept of development. First, the process of conceptual reconstruction may take place at the level of either theory or practice. This analysis, directed ultimately to an operational and planning audience, will limit itself mainly to matters of practice.[5] Second, the process may be viewed as either one of abandoning the conventional and commonplace conception of development entirely, or as one of expanding and refining it--of introducing new dimensions and reordered priorities into our models. This paper takes the latter approach. The goals and ideals of conventional development--

productivity, capital formation and the like--remain, *and will remain,* central to planning and development. What is at issue seems to me to be not the rejection of those things, so much as it is the placement of them in a more comprehensive network of goals and ideals.

I suspect that there is a tendency to be overly impressed with problems in the developed countries that can be traced to the process of conventional development itself and to reject that process in its totality. Those problems, described by John Hannah as ones of

> *population . . . of ecology . . . of compacted and congested living with ever increasing dependence on the economic system and the state administrative apparatus and a weakening reliance on the personal values of family and community . . . .*[6]

are essentially problems of *overdevelopment*--a state that most of the LDCs are a long way from attaining. Thus, remedies and changes of course that may be crucial for the developed countries may be far outside the immediate problems of the LDCs. While it may be quite sensible to exhort Americans to trim their consumption and to abandon the goal of unlimited growth in the name of ecology, to levy that responsibility on the LDCs seems a little misguided and more than a little unfair. In many instances in the LDCs, conventional development is still relevant, and to associate the notion of non-formal education with an expanded conception of development does not negate its possible role in the pursuit of conventional development. At most, the association can establish a rough priority structure for the study of non-formal education.

Finally, to emphasize non-formal education does not entail a rejection of formal schooling. Formal education has been a useful tool for certain purposes and it will continue to be. What is involved in the turn to non-formal modes of education is a search for ways to do things that the formal schools have demonstrated their incapability of doing or that can be done more effectively in some arena other than the formal school. Especially pressing is the need to find means through which more, and more effective learning, can be made available to more people, at bearable costs. That, however, does not mean advocacy of the utter abandonment of formal schooling.

The Commonplace Construction of *Development*

The construction of the development concept that has been pervasive since the 1950's is an extrapolation from the dynamics established by the central mechanism of increased economic productivity.[7] The theoretical construct that summarizes productivity--one with which we are all familiar--is Gross National Product (GNP); that is, the total value of all final products--consumption goods, net exports, private investments and government purchases.[8] The byword of development, then, becomes increase in GNP. Policy is derived from and defined by that objective and evaluation of development programs is rendered in terms of GNP.

This proposition is, in effect, a generalization from historical economic experience. "Development" is taken as a comprehensive concept, including a broad range of economic, political, social and humanitarian ideals. The adoption of growth of GNP as the primary engine of development incorporates the assumption that the accomplishment of the whole array of developmental goals will flow from increased GNP. It is, of course, recognized that the movement from economic growth to development, broadly conceived, is not entirely automatic--that it requires policies and management in other areas--but, by and large, the commonplace strategies and thrusts of development assistance have been to place very basic reliance on economic growth. This is especially true of two major elements of development--employment and, through increased employment, distribution of wealth through the mechanism of wages.[9] Employment and distribution, in turn, are seen as facilitating a great many political and social desiderata. Thus, economic growth is seen to be at the very least basic, and, at most, totally adequate to the process of comprehensive development.

Once we establish growth as the *sine qua non* of development, we may note several components, most of them related in one way or another to increasing GNP. Some of those components, like employment and distribution through the wage mechanism, are theoretized as direct consequences of economic growth. Others, such as the broadening of political participation and the homogenization of culturally diverse

populations, are seen as indirect consequences. Still others are conceived as either prerequisites to, or necessary concommitants of, economic growth. Those are the components that have greatest interest and pertinence for this discussion, since they shape the empirical picture of development assistance efforts. They are the conceptual foundations of assistance policies.

Capital Formation

In economic theory, the difference between a growing and a stagnant economy lies in the fact that, in growing economies, there is a consistently increasing surplus of wealth beyond consumption and that the wealth is available for investment. "To grow, an underdeveloped economy must build capital."[10] Investment, then, begets further and larger surpluses, which, in turn, are invested and generate further economic growth. A first goal of development is the achievement of the "take-off point" for a given society--that is, the point at which wealth (productivity plus credit) exceeds internal consumption. Conventional development policies have centered on the attainment of the take-off point through such strategies as increasing productivity, external investment and credit and transfer of capital within the economy from sectors with little or no potential surplus to those with high potential for the generation of surpluses. With some exceptions, those policies have embodied one or more of the following tactics.

Agricultural Production

To begin with, most of the LDCs have had inadequate agricultural production for even their own domestic needs. They have been afflicted with simple shortage--not enough food--and with the more complex difficulties of poor nutrition arising from poorly distributed production and nutrition-reducing health conditions. Massive assistance efforts have centered on just the provision of adequate nutrition in the LDCs, both in the distribution of agricultural production in the LDCs. The latter effort has, in addition, been an important staple of the effort to form capital.[11] In most of the LDCs, agriculture is the largest

sector of the economy and, on size alone, the best prospect for generating short-run surplus. As Heilbroner puts it,

> *When agricultural productivity is enhanced by the creation of larger farms (or by improved techniques on existing farms), part of the ensuing crop must be saved. In other words, the peasant who remains on the soil cannot enjoy his enhanced productivity by raising his standard of living and eating up all his larger crop. Instead, the gain in output per cultivator must be siphoned off the farm.*[12]

There are several ramifications of the employment of agricultural production as a primary growth sector. First, it implies a particular view of agricultural practice--that of the highly mechanized, large, cash-crop, money economy farm. Second, it looks toward the other sectors for employment, anticipating a transfer of labor from the newly mechanized farms.

> *By reducing the number of tillers of the soil, a work force can be made available for the building of roads and dams, while this "transfer" to capital building need not result in a diminution of agricultural output.*

Third, it anticipates a substantial period during which the lot of the rural masses would remain pretty much unchanged, while the fruits of their increased production would be transferred into other sectors where the new surplus might be channeled into investment, rather than consumption.

Industrialization

Although agriculture is the basic industry in most LDCs it cannot be expected to produce a self-sustaining capital surplus. At best, it can generate a modest surplus capable of moving an economy along the road toward economic growth. At that point, industrialization becomes critical, since industry provides a much more fertile ground for economic expansion. Industrial production is squarely within the money economy; it is a prerequisite for trade and has, in its use of technology, a high potential for return on investment. On the commonplace construction, industrialization comes to symbolize development. Too, the reliance is mostly on fairly heavy industry, producing products for trade (steel, chemicals, rubber, etc.) and only secondarily on goods

for domestic consumption (appliances, cars, radios, etc.). There are at least three important concommitants of this sort of industrialization policy, all of which have significances for education. First, the industrial worker, albeit to a lesser extent than his rural counterpart, is part of a system more concerned with capital formation than with improving his own standard of living. It is the achievement of surplus for investment, rather than consumption, that is the primary objective. Second, urbanization becomes a central characteristic of development, as the building of heavy industry necessitates the movement of workers to large, centralized industrial facilities. Finally, targeting on heavy industry with reliance for manufactured goods placed on the developed countries serves to develop symbiotic networks between LDCs and the developed countries of which they are "clients." Since those networks are symbiotic at the level of economies, they are persistent and tenacious in a way that other sorts of networks--political, cultural and so on--are not. The importance of these conditions for education will be discussed further on.

Institution Building

Even a casual observation of the history of the developed nations show that the development process is accompanied by the emergence of institutional arrangements that serve to carry forward the activities that lead to (or follow from) economic growth. For this reason, another dimension of conventional development strategy has been the systematic construction of institutions designed to perform the administrative and organizational functions of an expanding economy. There are a great many such institutions, ranging from corporations and lending agencies to state ministries. The question of education and conventional development lies within the domain of institution building, and I will discuss that matter in detail shortly. First, let me mention one trait of institution building in general that has importance for the present analysis.

The development process as demonstrated in the history of the developed nations frequently has been a lengthy and chancy affair. This

is especially so when the formation and allocation of capital is unregulated by non-economic institutions. Put another way, economic growth is haphazard to the extent that it does not proceed from a base of careful economic planning. The advancement and theoretization of the planning process is one of the major accomplishments of Keynesian economics. That body of theory gives a central place to economic intervention within the public sector, primarily through the manipulation of public spending and tax policies. This is especially the case in the LDCs, where the pressure for rapid economic growth is great. In practice, this has taken the form of the creation of strong, highly centralized national governments and bureaucracies, just because of the identification between governance and economics that is the inevitable result of an imperative for economic planning at the national level.

> *In the politically immature and labile areas of the underdeveloped world, this exercise of leadership typically assumes the form of "strong man" government. In large part, this is only the perpetuation of age-old tendencies in these areas, but in the special environment of development, a new source of encouragement for dictatorial government arises from the exigencies of the economic process itself.*[14]

What is important here is not so much the moral or political justification of strong central government as it is the anchoring of that kind of government in "the exigencies of the economic process itself." Acceptance of strong government flows from an emphasis on planning which, in turn, follows as a natural consequence of identifying economic growth as the primary or exclusive instrument of development.

Education

Let me turn now to a quick sketch of the approach to educational assistance that has evolved from the economic construction of development. Just as the economic strategy for development is a generalization from the experience of the developed nations, so are the educational arrangements characteristic of development assistance. When one looks at the developed nations, one of the most impressive things about them is the extent of schooling. All developed countries, socialist or capitalist,

Eastern or Western, have extensive and elaborate systems of education, vested most visibly in formal, state-supported schools. The conventional wisdom holds that there is an intimate association between the existence of the schools in the developed nations and the extent of their development. Although this is a largely unexamined belief, it is a tremendously strong and pervasive one. Educational assistance has, in general, attempted to duplicate, in the LDCs, the school systems (but not the comprehensive learning environments) of the developed nations and to clothe the duplication in a rhetoric that links schooling with the development-economic growth process.

My interest here is mainly with the employment of formal schooling as a vehicle of development, since I would argue that, for the most part, when educational programs have emerged from the concern for development, the chosen agency has been the state-supported school. This pattern is probably more a "natural" consequence of the involvement of schoolmen in educational planning than it is the result of careful deliberation and choice-making. There have, of course, been many educational efforts that have taken other forms, particularly programs in health education, nutrition education, population control and agricultural extension. In general, those sorts of programs relate to development by way of seeking to establish the minimum requisite conditions of health, nutrition and restricted population growth without which it is simply impossible to work toward economic growth. The chief difference between what might be called "service education" and formal schooling lies in placement of the latter within the institution-building effort. The extrapolation of "education" from the concept of development resulted mainly in the notion of building an "educational system," i.e., a system of institutions called schools. The extrapolation has placed greatest emphasis on three general functions.

Modernization

Even those who place almost unlimited faith in the developmental power of GNP recognize that economic practice is inseparable from culture and psychology.

> *These are poor societies because they are traditional societies. . . . Typically, the people of an underdeveloped economy have not learned the "economic" attitudes which make for rapid industrialization.*[15]

Economic growth is associated with changes in the attitudes-behavior complex of the people of the LDCs. Those changes customarily are lumped under the rubric of "modernization."

Although the concept of "modernization" is not entirely stable in theory, it is usually taken to involve shifts in learning style, time organization, perception of the social context and the natural world, notions of progress and mobility, alterations of internalized reward structures, acceptance of new ideas and so on. *Operationally,* the educational definition of modernization centers on literacy, numeracy and informational learnings--the sorts of things that, in the developed nations, are ordinarily associated with basic primary education.

> *Economists have debated as to whether education is a prerequisite for development, or vice versa. But there is little question that human resource development and improved standards of education are closely linked: one cannot proceed very far without the other. The experience of the last decade has underlined the fact that illiteracy and insufficient education seriously retard modernization efforts in developing countries.*

Given that line of analysis, education in the LDCs has usually centered on the creation of national systems of basic schooling, with primary emphasis on literacy.

Manpower Training

If industrialization dominates thinking about development, a crucial question becomes that of finding the workers for new industry. There are--or at least seem to be--important and obvious differences between a traditional, rural work force and a modern industrial one, whether we are talking about workers directly involved in industrial processes or workers in the array of supportive occupations that emerge with urbanization and industrialization. A basic premise of development strategy has been that of the need for systematic effort to create, out of a traditional, usually peasant population, an effective modern work

force. Some of that imperative has been vested in the modernizing force of conventional primary schooling. In other instances, such non-formal means as on-the-job training and private training programs have been utilized.[17] Another approach--a very popular one and one in which large amounts of money and effort have been invested--is that of technical training dispensed through formal vocational school programs. Here, again, the point of reference is practice in the developed nations, or at least the usual description of that practice. (We are only beginning to realize that our descriptions may be distorted in their failure to take adequate account of non-school technical training.) Technical schooling sometimes proceeds from manpower projections worked out from economic development plans. The preparation of people to satisfy projected manpower needs is then located in technical training schools operating programs of fairly long duration. The actual impact of manpower projections on employment and job-training has probably not been great. Perhaps a more important element has been the separation of labor supply from labor demand. Technical schooling becomes a "supply" agency and it is usually supposed that it can operate effectively as a respondent to "demand," utilizing an application of a free marketplace model. This supply and demand process has almost certainly been a more important shaping influence in technical education than has manpower planning. As in the case of elementary schooling, the effort has been to build a *system* of manpower training that mirrors the industrial system planned as the backbone of economic growth.

The Professional Class

Developed nations all display a class that seems to be distinctive to them, as against traditional or antique societies. That is a class of professionals, so designated by virtue of educational attainments, who discharge a wide variety of administrative, managerial and service functions. (The LDCs are, to be sure, familiar with the professional class, but, until recently, that familiarity came mainly from contact with colonial administrations.) The invariant association

between development and the existence of the professional class established a third educational imperative for the LDCs--to identify, train and install in power a native professional class, either *de novo* or, more frequently, as replacements for the colonial administrators, doctors, teachers, planners, accountants, lawyers and so on.

The pattern of this process has usually been based on the Western model of general secondary education--part preparation for higher education and part screening in its function--and university education. In most cases, this has meant the dramatic enlargement of decrepit systems of secondary schools and colleges inherited from the colonial powers and, in some cases, the construction of an entire system of secondary and higher education from the ground up.

There are a great many other sorts of educational programs in the LDCs--possibly a great many more than we have, until recently, paid any attention to. Still, the bulk of educational effort, following educational imperatives rooted in the concept of economic growth, has been channeled into modernization education, technical training and the creation of a class of professionals.

The Need for Conceptual Reconstruction

The model summarized above is a basically sound one. It is logical, tight, consistent with history and theoretically sophisticated. But, in all too many instances, it has not worked. More precisely, it has often proven to be impossible to apply it. The trouble is not with the assumptions of the model nor in its theoretical explication, but in its incapacity to include a number of fundamentally crucial variables. The first need is for an expansion of the development concept, and, where the introduction of new variables has effect on the conventional ones, a reconstruction of the entire conceptual domain in light of the relationship between the new variables and the old. Let me turn briefly to some of the major factors that are left out of the economic growth conception, but which must be taken into account if planning and development strategy are to work as well as they should. I will treat

several of the general factors and then some of their specific implications for education. The factors I wish to discuss in detail are these:

1. The need to deal with broadly humanitarian and survival needs, always an important part of development strategy, has taken on even greater urgency in recent years.
2. Increasingly, people in the LDCs are insisting on playing a central role in initiation and planning for development--on playing a more decisively proactive role than they have in the past.
3. As the life situations of the general population of the LDCs have begun to figure more importantly in planning, it has become clear that development efforts must give a central place to problems of distribution of wealth.
4. In primarily rural LDCs, it is becoming apparent that comprehensive plans of rural development are often preferable to approaches that build in urbanization.
5. We are coming to recognize that employment is a problem and a goal in its own right and not just a component of the general problem of economic growth.
6. Several factors converge to generate a major imperative for decentralization of planning in the development process.

Survival

The problem of economic growth in the LDCs is now drawn in much more somber colors than it used to be. The problems have, quite simply, proven to be much more intractable than had been thought, especially those that fall within the domain of sheer survival--health, nutrition, housing and so on. This realization is, in part, a result of experience and, in part, due to the application of economic measurements to economies for which no accurate figures were previously available. It is not *simply* that the LDCs lack the "economic attitudes" of which Heilbroner speaks. That lack, real though it is, is compounded by a grinding poverty that has proven to be enormously resistant to our past efforts to allay it. Added in to this equation is the only very limited success of efforts to limit population growth. Improved health services, increased longevity and reduced infant mortality, combined with nearly constant birth rates, have resulted in population increases

that, in terms of consumption for mere survival, have placed greater demands on national economies. So great are those demands that even spectacular growth rates in the range of six per cent have been unable to offset them. In practical terms, this has meant that thinking about development--and the allocation of resources--now is beginning to give a more central place to basic humanitarian services.

Furthermore, the meeting of survival needs is beginning to be freed from its ties with economic growth policies. Assistance for survival must be carried out in its own right, and not just as one dimension of programs that have economic growth as their ultimate and formative objective.

> *The developing countries have built a record of progress and accomplishment. But the lives of most people hover still at the margins of subsistence. . . . Most of the major problems of the developing countries require new types of public and private institutions, new policies for allocating resources, new means for delivering services, new patterns of growth which provide jobs more efficiently, and, in many cases, new technologies.*[18]

Nationalism

During the past 25 years, much of the developing world has emerged from colonial rule to independent nationhood. That emergence has produced, today, a situation quite different from that of the early years of development assistance. The emerging nations, in their early history, were politically volatile and unstable. They still are, but a maturity and stability has been attained in some places and the prospect of continual political turmoil is not so much a fact of life in the LDCs as it once was. Too, the LDCs were caught up in the global power struggle of the U.S. and the Soviet Union. As a consequence, many of the LDCs found themselves in a client-sponsor relationship with one or the other of the major powers. The sponsor nations had an almost unlimited prerogative to impose their own structure on policies in the LDCs--economic, political, educational and, indeed, social and cultural. The situation at present is quite different. Many of the LDCs have attained a measure of autonomy based

in political stability and, as they have done so, they have begun to define their problems in terms that seem to them most in their own interests; banishing, as a primary concern, the strategic interests of the great powers. Those powers, in turn, have made appreciable progress toward a (hopefully lasting) detente and have reassessed their capacities for global, hemispheric and regional hegemony. Nationalism, that great bug-bear of the 1950's, is now a common base of policy in the LDCs and, increasingly, it is recognized as a legitimate posture by the assisting nations.

Whatever form development assistance may take in the future, it is almost certain that the LDCs, often operating out of a nationalistic impulse will almost certainly incorporate at least a partial rejection of the conventional doctrines of development. As John Hannah notes,

> *They [the LDCs] still want foreign assistance. They still require specialized technical advice. But they are appropriately less and less willing to tolerate donor countries attempting to tell them what their priorities should be; how they should plan; how they should budget and expend resources. The old tutorial relationship which has marked relationships between donors and recipients has become obsolete.*[19]

Increasingly, the role of assistance will be that of responding to initiatives arising in the LDCs--it will be reactive rather than proactive.

Aspirations

Much has been said about the "revolution of rising expectations." Construed broadly, this is a complex of two elements. First, the political and social awakening in the poor nations has resulted in a heightened assertiveness on the part of the poor *within* those nations. (This is, of course, as true in developed nations as it is in the LDCs.) As it is becoming more difficult to maintain a sponsor-client relationship between the wealthy nations and the LDCs, so it is becoming more difficult to maintain such a relationship between the wealthy elites and the poor of the LDCs. The aspirations of the poor have become a central theme in development equations. The

second element is the shape of the aspirations of the poor. Several factors--mass media, the spread of socialist practice and doctrine, deliberate programs of "consciousness raising"--coalesce to disseminate among the poor a rather sophisticated vision of what their lives might possibly be like. The absence of a vision of improved conditions, which, historically, has probably been a more powerful instrument for keeping the poor quiet than any other, no longer holds. As the political and social structure of colonialism has broken down, so has the psychology of colonialism. The fatalism of the poor, so often documented by researchers, is beginning to disappear and they are beginning to believe that things can be better for them. Development policy today will have to provide an important place for the (comparatively) progressive aspirations of the poor.

This poses a special quandary in the area of capital formation, since the conventional formulation relies heavily on the deferral of benefits from increased production. The aspirations of the poor, on the other hand, often demand a fair and immediate distribution of those benefits. The history of the LDCs has shown again and again the social and political price of failing to incorporate distribution as a central parameter of development planning and, as the aspirations of the poor become more progressive and are more vigorously asserted, the necessity for making that incorporation becomes more imperative.

The Limits of Industrialization

We have always known that there are limits to industrialization; that factors such as availability of capital, markets and labor, place restrictions on how rapidly and to what extent industrialization can be accomplished. There are, for instance, several notable instances in the U.S. in which job protectionism by organized labor has retarded the industrialization process. What we are finding out now is that the limits of industrialization may be considerably more severe in the LDCs than they were (and are) in the industrialized nations.

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A central difference between the industrialization process in the LDCs and that in those nations that built their industry some decades ago is that, in order to be effective, the former must compete successfully with the latter. Industry in the LDCs, even if it is supported with loans, external investments, subsidies and favorable tax and trade policies, must ultimately gauge its success or failure in terms of its ability to compete, both domestically and in world markets, with the industries of the developed nations.

Industry in the developed countries is "capital-intensive"--that is, the ratio between capital inputs and labor inputs to the industrial process is heavily weighted toward capital. This is a highly efficient formula, since capital inputs stay within the system, while labor inputs flow out of the specific system in the form of wages. In the LDCs, however, there is a serious shortage of capital and an abundance of labor. The reasonable pattern of industrialization is "labor-intensive," but the competitive potential of labor-intensive, as against capital-intensive industry, is quite limited. In effect, the industrial potential of the LDCs is limited to development of those industries that, in the industrial nations, are still relatively labor-intensive. It is probably unreasonable, then, to expect industrialization to carry the major burden of economic growth and more diverse programmatic approaches must be looked for. As E. G. Wedell has pointed out,

> *I suppose the safest generalization one can make about developing countries at the moment is that most of them will have a predominantly rural economy for many years to come. It is true that in a number of countries the industrial sector is expanding faster than the agricultural, and the number of countries where this will be so will increase. But in absolute terms the industrial sector will remain small. . . . Accordingly the future for the large majority of citizens of developing countries lies in a better life on the land. Such a better life can come about only if we manage to break the vicious circle of a low rural living standard which causes the drift of the able young people into the towns. This drift reduces the proportion of people with talent and enterprise in the rural areas and thus helps to perpetuate low living standards there.*[20]

Rural development, then, becomes a vital concern in development planning. The implications of this shift are many--to explicate them satisfactorily would take a major essay. It means, essentially, that efforts in the rural sector must place less emphasis on the creation of a surplus--although that remains important--and more emphasis on the creation (or preservation) of a viable rural culture and a commitment to progress worked out within the framework of a rural society. That means the softening of the conventional model of economic growth to include, in the rural sector, a labor-intensive economy of small holdings, with a high ratio of production for use.

Employment

Closely related to the notions of distribution and rural development is the problem of employment. Despite some progress in economic growth, industrialization and so on, the problem of unemployment has remained stubborn. Here, again, we see the impact of the imperative to compete with capital-intensive industry, since that imperative has resulted in a failure of industrialization to produce jobs in the hoped-for quantity.

> *Output in the modern sector thus seems to have grown much faster than employment, and given rates of output growth have had associated with them less employment growth in LDCs than in advanced countries, when relative factor endowments suggest that the reverse should have been true.*[21]

Furthermore, the bias provided by the conventional commitment to industrialization and its concommitants, such as urbanization, has, while drawing many people to the cities, where there are no jobs for them, also dried up employment in the rapidly mechanizing rural areas.

> *If policies are not designed to prevent premature "tractorisation" in areas where new hybrid seeds are being adopted, the consequences for unemployment are vastly greater. All of which is to emphasize that despite some tendency--at least until recently--for economists to focus their attention on employment problems in the modern sector, the heart of the problem lies elsewhere.*[22]

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Neither has economic growth produced very much redistribution through the wage market. Although wages in the urban modern sector have risen, the cost of labor has contributed to an emphasis on capital-intensive industry and a consequent increase in unemployment. Economic growth has pretty much proven inadequate as a distribution strategy. Berg, while arguing for the economic necessity of wage restraint policies, points out the need for other policies that are focused on the distribution imperative.

> *When scarcities appear the policy response would be to increase supplies not raise wage rates . . . by price control measures it might be possible to reallocate some of the benefits of wage reduction from profit receivers to consumers . . . complementary policies are required . . . which involve basic matters of development strategy such as the relative priorities to be given to agricultural and industrial development.*[23]

Development policy can neither ignore the problem of distribution, assuming that employment and wage mechanisms will take care of it, nor carry too far the control of income in the interest of forming capital. Instead, dynamic and systematic arrangements for more equitable distribution of wealth, goods and services will have to be made and incorporated into development schemes, even if it is at the expense of maximum economic growth.

Problems of Centralization

The necessity of central planning in the successful application of the conventional model has already been mentioned. As in the case of other requisites of economic growth, the development and operation of effective centralized agencies has proven extremely difficult and, in some cases, impossible. There are, of course, many reasons for this, including the sensational ones of corruption and dishonesty of central officials. Those, however, are probably not as important as some others, nor as difficult of solution.

One important element is the resistance, in diverse, traditional societies, to centralized authority. (I suspect that what is usually termed "resistance to change" is often more nearly resistance

to centralized authority or to the authority of some historically distrusted group.) A second element is inherent in the structure of conventional development. Centralization locates authority, prestige and income in the urban centers, drawing off, for the countryside, the most competent and progressive people--that is, just those people best suited to administering and advocating centrally-determined policies in the countryside.

Waterston discusses two other major difficulties with central planning. First, the more centralized planning is, the more the real situation must be abstracted and simplified in order for it to be conceptually manageable.

> *Because they usually stake out and lay claim to a very limited field, planners make it intellectually manageable to deal with; but because they exclude so many variables which enter into actual decision making, they diminish the relevance and usefulness of the results they have obtained. . . . Planners' preference for internal consistency over practicality or feasibility also helps explain why, at the national level in most countries, economic planning goes forward without anything like adequate attention to social, political, spatial, and ecological aspects of the choices being made.*[24]

Second, the massive amounts of accurate and carefully structured data that are essential to the central planning process is often simply unavailable or too incomplete to be relied upon.

> *Not only are parameters often little more than guesses, but basic data for population, population growth and migration, households, businesses, production, income, and standards of living, as well as many of the components of national and regional income accounts, are at best suspect and often nonexistent.*[25]

What becomes apparent, then, is that, in many cases, planning needs to be done at those levels at which the problems of centralization are minimized. That is, there will have to be a much wider acceptance of decentralization of planning, even though decentralization may not, in the abstract, be as economically efficient as centralized planning.

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> *While broad strategies and policies must be centrally determined, the widest authority must be delegated to local communities and bodies to plan for themselves. . . . Where the delegation of authority has been accompanied with enough resources to get a program started and with the appropriate kind of technical assistance to show the local people how to organize themselves to do better what they want to do (and not, as often happens, how to do what the outside technicians think the local people ought to be doing), the results have been good.*[26]

Summary

In summary, the reconstruction of the concept of development would seem to involve the accommodation of our existing theory to at least the six variables discussed above:

1. Greater effort in the "humanitarian" or "survival domain."
2. A shift, on the part of the developed nations, from a proactive to a reactive construction of their role.
3. The building in of measures that are specifically and deliberately geared to the more equitable distribution of wealth.
4. An emphasis upon comprehensive and fundamental rural development.
5. Efforts directed toward employment, per se, rather than just to employment as a corollary of economic growth.
6. Acceptance of some measure of decentralization of planning and decision making.

The incorporation of those variables into the planning process and its theoretization is not a task that can be accomplished overnight, but there are a number of clear signs that the effort is underway.

Let us now turn to a consideration of some of the inadequacies of the conventional conception of education for development.

Reconstructing the Concept of Development Education

The LDCs, along with the developed countries, presently are caught up in what Philip Coombs has called the "world educational crisis."[27] That crisis has several different facets and a number of "causes," some of them internal to the educational systems themselves

and some of them rooted in the tight linkages between educational policies and the commonplace concept of development. (In the developed nations, those linkages take a deeper, more mythic form, in which the relationship is not so much between education and a concrete picture of development as it is between "enlightenment" and "progress," both of which assume profoundly normative roles in the basic structure of cultural belief.) I would like to examine some of the facets and putative causes of the "crisis." That analysis, when coupled with the reconstruction of the concept of development discussed above, should provide some fairly clear directions and foci for the study and practice of non-formal education.

Demand for Education

The pattern that has evolved in the developed nations has, as mentioned previously, married schooling to development. Development, since it is perceived as containing most socially desirable goals, becomes a criterion for reward and prestige. And, as the handmaiden to development, education--or, more properly, formal schooling--has become a major avenue to material and status rewards. In societies such as the U.S., where inherited wealth produces only a tiny elite and where it has become very hard to win elite status through individual enterprise, schooling has become the primary means by which upward mobility is possible. The extent to which schooling is identified with the society-wide reward system is so pervasive that we scarcely even notice it. It is simply the way things are. "To get a good job, get a good education." This linkage has been transferred to the LDCs. Education--and, in most cases, that means formal schooling--is a socially and economically valuable commodity; it is the ticket to advancement and an essential part of a good life. No other criterion so often or so firmly separates the "advanced" from the "backward" than education in general and literacy in particular.

It is no wonder, then, that as the aspirations of people have become more assertive and more progressive, that the world-wide

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demand for education has increased enormously. It is important to note that demand is quantified in two directions. There is a demand for more people to get education and for those who get it to get more and more of it. Educational development goals take the general form: to move from an average of two years of school for forty per cent of the population to six years of school for ninety per cent. It is also important to notice that the demand is not exactly for "education," broadly conceived, but for schooling, since degrees, diplomas and school-leaving certificates are more valuable as currency than knowledge *per se*. It is not unusual to find perfectly serviceable educational opportunities unused, because they yield no formal certification, while schooling programs of dubious utility are innundated with applicants. The combination of the conventional conception of development, in its educational formulations, with the heightened aspirations of the masses of people, has produced "the sharp increase in popular aspirations for education, which has laid siege to existing schools and universities."[28]

Cost

Schools, as we all know, are rather expensive things to operate--even those that are minimal and shabby. As Coombs points out, what evidence there is seems to point to the face that educational costs tend to increase at a fairly steady rate.

> *An economist would infer [from available data] that education is a "rising cost industry"--that its inputs (at constant prices) for each similar unit of output follow an upward trend line over the years. If this is the case, as it seems to be, the implications are serious and far-reaching. It means, in effect, that each year, ad infinitum, an educational system needs more finances simply to accomplish the same results as in the previous year. If it wants to do more, and to do it better, it will need a still larger budgetary increase--all this apart from keeping up with inflation.*[29]

The effort to meet rising educational aspirations thus produces increased costs at a geometrical, rather than an arithmetical, rate.

In almost every nation in the world, developed or not, this cost pressure has produced dramatic increases in educational expenditures--in gross costs, in proportion of GNP spent on education and in the educational share of public budgets. Educational costs, as percentage of GNP, already exceed six per cent in many countries and, as percentage of public budget, many nations are reaching the level of 25 per cent. When one adds the additional compounding factor of population growth, the picture becomes clear: the limits of possible spending for education are being reached, or have been reached already, in most of the nations of the world.

Wastage in Sequential Systems

An almost universal feature of systems of schooling is their sequential character and their long duration. Arising from the conceptualization of education as a modernizing and elite-producing process, systems are spread out over a period of years, with real "payoff" contingent on the completion of an entire sequence. The lower steps of a sequence have little value, in and of themselves. Rather, their value lies in their status as preliminary phases in the entire process. Thus, a student who completes one year of a six-year primary school sequence takes little more--either in learning or status--than one who never enters the sequence. Loss within the system, through dropping out or repetition of steps, is almost a total loss, both in terms of investment of student time and investment of educational expenditures.

Wastage in all educational systems is high. Although drop-out data, even in the developed nations, is notoriously sketchy and unreliable, most careful studies indicate drop-out rates in the LDCs in the general range of 60 per cent or more.[31] Repetition rates are also high, so that a fairly accurate, typical picture is this: for every student who completes a sequential program, the investment of student time is more than double the years required for the program.[32] Thus, the cost, in student time and educational expenditure, to

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produce one graduate of a sequential program, when wastage is considered, is more than twice the per year cost for a single student.

It is possible, of course, to reduce wastage, but probably only up to a point, since all sequential systems show some wastage. (The most effective way is more rigorous screening, but that policy runs aground on the growing aspiration for more mass education.) A more promising tactic would seem to be to avoid, where possible, long duration sequences, in favor of short-run, self-contained programs.

The Educated Unemployed

Manpower forecasts derived from projections of economic growth and industrialization, when the power of growth to generate jobs has been over-estimated, have led to a paradoxical problem. That is, in both the LDCs and the developed countries, we are now finding a large number of people prepared to do certain kinds of jobs without jobs available to them. We seem to have operated under the assumption that the presence of trained manpower is a *prior* requirement of economic expansion--if the trained people are available the economic system will expand to accommodate them. Indeed, they will, through using their skills, *cause* the system to expand. Although there may be some evidence to justify that assumption, it now appears that there are limits beyond which available trained manpower cannot stimulate growth. As that limit is reached, many people will find themselves without jobs, despite the possession of credentials. This is especially poignant when the training is for specialized professional and semi-professional jobs, such as teaching, business administration and highly specialized engineering, since many people in those categories have no real chance for lateral transfer into labor-short areas.

The reason for the emergence of a new class of educated unemployed is fairly clear. It lies in tying job-training programs to a supply and demand model in which the "tooling-up" phase--technical education--is so long that there is no effective check on

oversupply. This leads to a situation rooted in the wan hope that supply will generate demand, a hope that, while it has sometimes operated in the commodity market, has never been fully realized in the labor market. To a lesser extent, the use of long-range manpower forecasts, often drawn from inaccurate, incomplete or overly optimistic economic projections, is a contributing factor. An important element in reconstructing our concept of development education, then, is to place a much greater emphasis on occupational training that is linked *directly* to employment needs and not to manpower studies. This becomes particularly important in relationships to some of the elements of a reconstructed concept of development. First, in regard to rural development, the degree of uncertainty about just what the character of the objective is seems to call for a highly flexible and job-specific approach to manpower training. Second, if we are to accept a greater degree of decentralization in planning, then the correlates of economic planning, such as educational planning, need also to be decentralized. Here, too, there is a need for designing educational approaches that are directly and emphatically related to the immediate problem. The grounding of educational planning in the clearly observable needs of present, concrete situations is perhaps the best antidote to what Coombs calls the "disparity between educational systems and their environments."[33]

Possible Directions for Non-Formal Education

Now let us begin to see what priorities for the study and practice of non-formal education can be derived from the preceding discussion. Again, I do not want to give the impression that these are the only legitimate priorities. All I wish to suggest is that an assessment of the development situation provides a fairly solid justification for what follows. Nor do I wish to limit the applicability of these suggestions to new constructions of development. They may also be useful in patterning the application of non-formal education to conventional development programs. There are several specific points I wish to make, but let me first cast what seems to me to be an

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accurate conclusion in a summary statement. In fitting our efforts in non-formal education to the needs and emerging patterns of development, we should give serious attention to programs and approaches that have as many as possible of the following characteristics:

1. Low per capita or per instructional unit costs.
2. Limited time duration, with frequent completion points at which students may terminate.
3. A clear base in immediate human needs--whether economic, political, social, health, nutritional, etc.
4. A recognition of, and responsive accommodation to, the aspirations of the participants.
5. A solid linkage to real employment opportunities, especially those such as labor-intensive agriculture and industry.
6. A working provision for decentralized planning and alteration at the level of use.
7. A high potential for distribution of whatever commodities are associated with the program--education, economic gain, improved health, better nutrition, etc.

I am not interested, at this point, in assigning priorities among these seven characteristics, nor even in suggesting that programs can be evaluated in terms of how many of the characteristics they contain, since high intensity in one or two characteristics may give considerable interest to an otherwise restricted case. All I want to do is to provide a list of program attributes that can serve to focus our attention as we try to clarify and refine our understanding of non-formal education. Perhaps, as we go along, we can develop techniques and models that will allow us to describe and evaluate programs along some or all of the dimensions listed here (and possibly others) with some degree of precision. For the moment, however, my interest is more in exposition than in quantification.

Before moving on to a more detailed treatment of a few specific issues, I would like to inject, without recounting the reasons for my holding it, a personal bias. It has become my conviction that, for a great many reasons, the problem of rural

development lies at the heart, not just of development in the LDCs, but of reform in the developed countries as well. I think we must, deliberately, turn our attention to the encouragement of decentralized community life, having, as a major component, a working symbiosis between man and his physical environment. If the concept of non-formal education, as an organizing rubric for inquiry and action, can give a high priority to rural development, it will, I think, enhance its potential for making an important contribution to social thought and human betterment.

Non-formal education is not a magic solution to problems. It is, at best, and then not always, a somewhat more promising approach to some problems than formal schooling has proven to be. It should be thought of as a specific and not a general remedy for educational shortcomings, with its utilization to be determined by contextual conditions and its effectiveness conditional upon its proper use. One of the things we must do, in our study of non-formal education, is to form as clear a picture as possible of what its best potentialities are and what conditions make it most effective. There are several issues related to that question. I would like to discuss four of them that seem to be of central importance.

Emphasizing the Inabilities of Formal Schooling

It is finally becoming clear that the educational capabilities of formal schooling are limited. Simply put, schools cannot perform all of the educational functions that are important to life. If this is so, then one way of exploiting the potential of non-formal education most efficiently is to emphasize non-formal procedures in the case of objectives to which the school is ill-equipped to respond. There are a number of these, but I will concentrate on only one, and that is the inability of the school to build its programs on a foundation of authentic activity. By that, I mean that the school is, by its very character, a cloistered situation. The authentic materials within the school, no matter how carefully they may be chosen or constructed, are, at best, *derivatives from and not a primary part of*

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the authentic life situations of the learners. (I am not suggesting that that is always a liability. In some cases, it is advantageous to learn about life situations at a distance, especially when such learning requires an expansive objectivity that may not be attainable within the life situation itself.) In schools, for example, one may learn the techniques of a job, but what it is like, what it means to do a job, can only be learned by doing it. Non-formal education would seem to have a particular force in the case of educational objectives that seem to require participation in an authentic situation for their full realization.

Utilization of the Oral Tradition

Earlier on, I pointed out the central identification between schooling and literacy. That identification is historically uniform. The school, in all of its historical instances, is a literate institution. However, as we all know, illiterates learn a great deal and there are non-literate modes of education. Every culture, even such a highly literate one as the U.S., contains a large and educationally potent oral tradition--a complex of communication networks and substantive matter that exists quite apart from the literate tradition. This tradition, long the object of study by folklorists, has enormous educational potential, but that potential has seldom been systematically used for explicit educational purposes. The possibility of so using it, especially in regard to problems of great urgency, such as those within the domain of survival, should not be overlooked. There are a great many educational objectives that can be accomplished without literacy and I would suggest that, within the domain of non-formal education, we might give emphasis--and a positive emphasis--to the oral tradition as a potent and valuable educational medium.

This is true, as well, of other kinds of agencies that, although not technically part of the oral tradition, are already "in place." Farmer co-operatives, trade unions, religious institutions,

political clubs and so on are already extant in many environments and might well be utilized as transfer agencies.

Reliance on Local Resources

The attainment of several of the characteristics listed above would seem to depend pretty heavily upon maximum utilization of local, as against external, resources. Certainly one of the major factors in the cost of educational programs lies in the training of teachers and the logistical support costs of bringing programs into a location--especially an isolated location. If non-formal programs place heavy reliance on local resources, it might be possible to achieve fairly dramatic reductions in costs. Too, if non-formal programs are to be adapted to local needs and situations, that adaptation should be more accurate if there is substantial participation on the local level. I do not intend by this the highly "romantic" notion that *only* locals are qualified to plan and make decisions, but only that planning should be more effective if there is a solid provision for local inputs.

Revising Reward Structures

Finally, the success of non-formal programs is likely to be highly dependent on the extent to which the relationship between schooling and the society-wide reward and status structure can be broken. That relationship is a powerful one and, if it is maintained, will almost certainly provide a great deterrent to acceptance of and participation in non-formal programs. It is simply silly to suppose that non-formal education can compete with a formal system if the latter is the wellspring of status and income. There are two ways to approach the reward structure problem. One is to downgrade the status-related character of schooling by limiting the rewards of schooling to those things to which schooling is relevant. It is one thing to bestow income and favorable working conditions on, say, an accountant, because he has been to school and acquired the skills of an accountant. It is more questionable, however, to give him a social and political

status in regard to affairs for which he has no special competence, just because he has been to school. The second way is to take care, when implementing non-formal programs, to assure that tangible and strong rewards are available upon their completion. In many cases, the assurance of employment has been a potent way of securing participation in non-formal programs. Certificates, licenses and titles could also be used, especially in cultures where such things carry a great deal of weight. Social approval, if properly orchestrated, can also provide a status basis for non-formal education. However the problem may be attacked, it *must* be attacked, since the tyranny of the formal school is buttressed more strongly by its status as the exclusive avenue for social and economic advancement than by anything else.

Summary

I have argued here that the concept of non-formal education can be given focus by relating it to the emerging reconstruction of the notion of development and assistance strategy. Having characterized the directions in which that reconstruction seems to be heading, and after discussing some of the short-comings of past patterns of formal schooling, I suggested that one way of establishing priorities within the effort to study and implement non-formal education would be to give special attention to programs that are low-cost, short-duration, need-based, aspiration-accommodating, employment-linked, decentralized and highly distributive. Further, programs that undertake objectives not usually accomplished by the formal school, that make wide use of local resources, that exploit the oral tradition or take particular cognizance of the problem of reward structure are of special interest.

It should be possible to derive quite a large number of fruitful study projects from this discussion. To mention but a few: It should be of value to look at any available case studies of non-formal programs in terms of the ways in which and the extent to which they display the characteristics listed. This might be particularly

valuable in determining the degree, if any, to which the possession of the listed characteristics contribute to the success or failure of the programs. If the emphasis on rural development presented here is accepted, it would be helpful to have one or more fairly comprehensive discussions of what rural development could be and what dynamics might operate to produce it. In relation to that, it might be useful to study in some detail the mechanics that have operated in the formation of societies that might be classified as "rurally developed." More specifically, instances of educational programs specifically directed toward rural development (such as, possibly, the Scandinavian folk school movement, American education prior to 1940 or recent Cuban education) should prove useful. If the oral tradition is to be employed as an educational medium, an examination of how that system works, in educational terms, might be useful. Further study of the effects of duration on success, retention and so on might well be undertaken, as well as studies of the relationship between educational costs and such factors as duration, the degree of reliance on local resources and so on. In many countries, it would be helpful to have a carefully formulated picture of the precise relationship between schooling and the reward structure, as well as a notation of the relationship between non-formal programs and rewards.

There are, I am sure, a great many other kinds of inquiries that would be helpful or necessary to the full development of the focus on non-formal education presented here. I have tried to articulate a conceptualization for inquiry into non-formal education and while I regard it as a fruitful one, others may not. Perhaps the most important thing is not the acceptance of a *single* focusing strategy as it is an acceptance of the fact that *some* focus is needed if "non-formal education" is to be a useful concept.

NOTES: CHAPTER II

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1. Much of the work that has been done at Michigan State University on the analysis and taxonomy of the concept of non-formal education will be presented in a later number of this series.

2. See, as examples, the following documents of the Agency for International Development: "Summary of Reorganization Plan," January, 1972; "Priority Problems in Education and Human Resources Development--the Seventies," November, 1970; "The Rationale for the Key Problem Areas," August, 1971.

3. "Address by the Honorable John A. Hannah, Administration Agency for International Development, Department of State," Rotary International, Houston, Texas, June 13, 1972, p. 4.

4. Mahbub ul Haq, "Excerpts--The Crisis in Development Strategies," *Survey of International Development*, May, 1972, p. 4.

5. The need for new theoretical formulations is beginning to be widely recognized and some important and interesting work is being done. For example, Albert Waterston, "Resolving the Three-Horned Planning Dilemma," *Planning 1971*, The American Society of Planning Officials; Rolland G. Paulston, *Cultural Revitalization and Educational Change in Cuba*, International and Development Education Program, University of Pittsburgh, March, 1972; and Denis Goulet, "An Ethical Model for the Study of Values," *Harvard Educational Review*, 41:2, May, 1971, pp. 205-227.

6. Hannah, *op. cit.*, p. 11.

7. There are several good "layman's" presentations of theory of economic growth and its relationship to the problems of the LDCs. I have relied primarily on that of economic historian, Robert L. Heilbroner, *The Making of Economic Society* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962).

8. *Ibid.*, pp. 109-110.

9. *Ibid.*, p. 209.

10. *Ibid.*, p. 208.

11. What is true of countries where agriculture is the primary resource base is true, as well, with modifications, of those countries that find their basic industry in natural resources, such as metal and petroleum.

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12. Heilbroner, *op. cit.*, p. 209. Italics in original.

13. *Ibid.*, p. 209.

14. *Ibid.*, p. 218.

15. *Ibid.*, p. 203.

16. James R. Sheffield and Victor P. Diejomaoh, *Non-Formal Education in African Development* (New York: African-American Institute, 1972), p. ix.

17. *Ibid.*, contains several interesting descriptions of non-school technical training programs.

18. Hannah, *op. cit.*, p. 9.

19. *Ibid.*, p. 10.

20. "Adult Education and Development," *Journal of Administration Overseas*, p. 82.

21. Elliot J. Berg, "Wages and Employment in Less-Developed Countries," in *The Challenge of Unemployment to Development and the Role of Training and Research Institutes in Development* (Paris: Development Centre of Organisation for Economic Co-operation and Development, 1971), p. 106.

22. *Ibid.*, p. 105.

23. *Ibid.*, pp. 122-123.

24. Waterston, *op. cit.*, p. 37.

25. *Ibid.*

26. *Ibid.*, p. 41.

27. Philip H. Coombs, *The World Educational Crisis: A Systems Analysis* (London: Oxford Press, 1968).

28. *Ibid.*, p. 4.

29. *Ibid.*, p. 47.

30. *Ibid.*, pp. 52-60.

31. Sheffield and Diejomaoh, *op. cit.*, pp. 45-62.

32. *Ibid.*,

33. Coombs, *op. cit.*, p. 4.

CHAPTER III

HISTORICAL PATTERNS AND PROBLEMS

Even though it is impossible to detail historical patterns of education in an adequately theoretical way, it is not difficult to identify a recurrent functional relationship between educational arrangements and a few major kinds of historical dynamics. (By "functional" we intend the technical sense of the term, under which (x) occurs concomitantly with (y) in some established ratio of incidence. Statements about the relationship of (x) to (y) are intended *only* to indicate concomitance of incidence and should not be taken to impute cause, in a strict sense of "cause.")

First, we can discriminate educational arrangements on the basis of whether they are discrete or integral. In some cases "education" is a consequence of involvement in a mileau, but a consequence that neither provides the primary focus for the mileau nor occupies a central position in the awareness of the participants. It is, simply, education that "just happens." In other cases, "education" is the central focus of activity and has a primary and formative place in the awareness of the participants. It is deliberate and does not just happen. *If* it happens, it happens because it was *intended* to happen. This is, of course, a fuzzy distinction--too fuzzy to build a theory on. It is true, for example, that in many contexts some of the participants are aware of educational components of the context, while others are not. There is, as well, in most contexts, a shifting focus of awareness, of intent, so that an activity may, at one point, have education as a primary focus and, at another point, that focus may recede in favor of some other. Still, for purposes of having a crude vehicle for discussing broadly executed historical statements, we will utilize a

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distinction between education that is *integral,* that is a consequence of participation in a mileau, that is "incidental," "non-deliberate" and "invisible" and that that is *discrete,* deliberate and visible *as* education.

Second, we can make a gross distinction between education that is undertaken for some clear, fairly simple and immediate purpose--in order to solve a problem that is present and well-defined--and education that is more "general" in character--that is preparatory to some eventual activity or that is related to some generally and ambiguously defined future problem. There is, for example, a difference between a child learning how to mix paints in order to paint a picture that, at that moment, he wants very badly to paint and his learning a bit of science because somehow that is related to the general problem he will someday face of having an occupation. We have, on the one hand, education in which the problem is very much a term of the activity and, on the other, education in which the problem occupies a marginal place. In one case the relationship between problem and activity is *direct*--for *this* purpose--and, in the other the relationship is *indirect*--for some *later* purpose. This, too, is a distinction that is ambiguous and, probably, theoretically useless. All that is suggested is that it is heuristically useful. (It should be noted, however, that a distinction between direct and indirect education is, in a variety of terminologies, a recurrent theme in talk about non-formal education. That theme is sufficiently strong to suggest that, at least in the arena of practice, the major dynamic for the advancement of the notion of non-formal education is a desire to find, construct and support educational programs that are directly related to immediate problems. We would suggest that, whenever the educational dimensions of a developmental situation are examined, the first question that should be asked is whether the educational problem can be understood adequately in terms of the need for direct approaches.)

Now, if we match up the notion of integral and discrete education with those of direct and indirect education we can discover

that, while the internal relationships between the two dimensions are by no means perfect, they may be strong enough to give us two abstract poles, with an assumed continuum between them, that can be related to dynamic historical continua that are also defined by isolating polar ideal types. The educational types can be identified by associating integral with direct education and discrete with indirect education. (This does not, of course, mean that the other two cells--integral/indirect and discrete/direct--are empty, only that those combinations are less frequently found. Given a sufficiently large collection of data to which the two distinctions might be applied directly rather than inferentially, it might be possible to establish quantified correlations between the two parameters of the matrix. It is probable, however, that the distinctions are too ambiguous to justify the time and energy necessary for that enterprise.)

We would like, then, to make a very hazardous stipulation--hazardous because if it is forgotten or if it is taken as some sort of all-embracing statement about the "real world," rather than as a *mere* stipulation, adopted in order to bring this report within the linguistic conventions of a still unclarified arena of discourse, what is said here is likely to be misconstrued or regarded as more controversial than, in fact, it is. The stipulation is this: *within the context of this report, "formal education" is, in general, intended as a name for education that is discrete and indirect and "non-formal education" is, in general, intended as a name for education that is integral and direct.* The stipulation is made because, *for purposes of identifying and discussing historical paradigms,* it has proven to be a useful and intelligible one. That does *not* mean that it is a particularly useful one for other endeavors, such as the description of educational arrangements, the cataloging of specific cases or the process of planning and implementing "non-formal education" programs. Indeed, in the latter case, what most often seems to be at issue is the construction of approaches that are *discrete and direct* and, for certain important kinds of patterns, we will subsume the discrete/direct category under the general rubric of "non-formal education."

So, too, will we sometimes subsume the integral/indirect category under "non-formal education." This is due, in large part, to the fact that, from its inception, the domain of "non-formal education" has usually been conceived negatively as "out-of-school education" and schools, as they are conventionally thought of, at least *seem to be* saturated with the qualities of discreteness and indirection. It is hoped that this stipulation, obscurred as it inevitably is by the lurking question of what non-formal education *really* is (a question that, at this point is ultimately futile) will, in bringing this discussion within conventional terminology, provide a benefit that outweighs the problems it creates.

We can move now to the establishment of a few gross correlations between a posited movement along the axis of non-formal to formal education and several conventional historical dynamics. Those correlations form the conceptual framework for the delineation and presentation of several historical paradigms. Let us begin by listing educational forms in their functional relationships to historical dynamics in tabular form. This will be followed by a brief discussion of overarching direction given to inquiry by the correlations and, then, finally, by a set of paradigms that provide at least a tentative explication and validation of the asserted correlations.

In general, formal education has been associated with:	In general, non-formal education has been associated with:
Geo-political units that are:	*Geo-political* units that are:
Large	Small
Volatile	Stable
Culturally diverse	Culturally homogeneous
Organized as states	Not organized as states
Societies in which there are identifiable class systems or some complexity.	*Societies* in which there are no class systems, or class systems having little complexity.
Economies in which private ownership is the predominant mode for the distribution of property	*Economies* that are communal, or mixed, with communal ownership as the predominant mode.

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Systems of production that utilize large amounts of mechanical energy.	*Systems* of production that utilize small amounts of mechanical energy.
Societies in which there is considerable differentiation between individuals and between groups in regard to economic, social and political activities.	*Societies* in which there is little differentiation between individuals and between groups in regard to economic, social and political activities.
Societies in which linear and analytic modes of thought are the norm.	*Societies* in which global and relational modes of thought are the norm.
Societies in which fragmented and encapsulated "roles" are the modal form of personality organization	*Societies* in which integrated and wholistic "selves" are the modal form of personality organization.
Literate Societies.	*Non-literate Societies.*
Economies possessing substantial amounts of surplus wealth.	*Economies* having little surplus wealth (subsistence economies).

Now these are fairly rough categories of correlation and, certainly, there is considerable overlap and perhaps even duplication among them. The overlap is a consequence of the fact that, while what a learning theorist, for example, may call learning style may turn out to be a close analog of what a social psychologist might call personality organization, there are two different bodies of literature and two traditions that, if lumped together, obscure part of the potential contribution to our understanding that can be made if they are treated separately. Neither is it supposed that this short list of correlations is exhaustive. There may well be others, of equal or greater importance, not included. The list is, in effect, limited by the range of inferences that can be drawn from the paradigms, and even some of these inferences must, necessarily, have a rather flimsy base. (Necessarily, because the data available to historical study is not often designed in the way that would be most productive for the questions asked by a specific historical inquiry.)

The practical significance of the correlations (if any) is of this sort: if a particular developmental scheme or imperative involves, for example, the homogenization of culturally diverse sub-cultures, then, on the basis of historical patterns, formal education would seem to be the most *effective* (though not necessarily the most efficient, in simple cost-benefit terms) way of attacking the problem. If, as another example, an economic development program has labor intensiveness as a goal, the program can probably best be served by non-formal education mechanisms. On a somewhat different level, we might say that in subsistence economies non-formal modes of education are more appropriate than formal modes.

This cluster of correlations can be seen as relating directly to four recurrent problems characteristic of the study of educational history.

The Problem of Conservation and Change

History has, as its central subject matter, the process by which cultures alter or remain static, disappear, burgeon, and so on. This is true, even though there is very little agreement on the question of what sorts of variation are most important in accounting for change (or for stasis). The history of education is especially concerned with the problem of conservation and change, since in some cases it is possible to make strong arguments for (a particular) education as an instrument of conservation, while in other cases it can be argued, just as strongly, that education can be construed as an engine of change. In point of fact, it is probably that education functions both ways in most settings. What is important is not to try to settle the archaic question of whether education is conservative or dynamic--it is both and either--but to look for and analyze cases in which the conservative or dynamic consequences of education are predominant. That, in turn, will probably depend heavily upon whether a society is, in its global outlines, static or dynamic. But it would be premature to say that the relationship of education to change is, at all times, reflective of the general static or dynamic state of

society, since there are cases in static societies of education providing a dynamic variation and vice versa. Too, no society, unless it be a very small and homogeneous one, is uniformly static or dynamic. Change occurs in segments and any society in which segmental change is taking place needs mechanisms for the maintenance of contact between sub-groups with different change rates and for disseminating the essential requisites of change. Education can, frequently, be found to play one or both of these roles. In terms of formal and non-formal education, the question is whether the two modes can be sorted out in association with stasis and dynamic. There appears to be evidence that they can. That is (keeping in mind what is meant *here* by formal and non-formal education), formal education seems to be associated with dynamic movements in societies (and with the sub-problems of maintaining contact between changing segments and disseminating change) while non-formal education seems to be associated with stasis.

The Problem of Differentiation

Differentiation is a covering term that can be applied to quite a large number of categories of phenomena. We can talk of personality differentiation, or economic and political differentiation, of social differentiation and so on. Every social science applies differentiation as an analytic tool at least some of the time and several--notably anthropology and sociology--are almost entirely devoted to differentiation. Certainly, in the sweep of history we may notice marked movements along the continuum marked at one pole by undifferentiation, and at the other, by total differentiation. At the undifferentiated pole we would posit (realizing that it is an ideal type) a situation in which all men were "integrated personalities" (Rousseau's "noble savage" or Billy Budd), all of the time, in which every person was, in terms of personality configuration pretty much like every person, in which each person performed all the economic activities necessary and possible within his environment, in which all were political and social equals, and so on. At the totally

undifferentiated end of the spectrum (again, an ideal type) we would notice the total fragmentation of personality into compartmentalized roles, the absence of commonality between persons in any other than role conjunction, each person performing a fractionated productive task unlike that performed by any other, with a totally monetized market system regulating distribution, highly complex social stratification, a clearly skewed distribution of political power and so on. So noticeable is differentiation as a phenomenon that its adoption as a unitary basis for historical analysis is not uncommon among historians and social scientists. (Usually, too, the movement that is noticed is always from undifferentiated to differentiated, although there is no reason, except perhaps relative frequency, for not taking the opposite movement into account. There are, of course, major examples--the collapse of the Roman hegemony and the barbarization of Europe being the one that has attracted the most attention--of a movement from a high to a low degree of differentiation.) The problem of differentiation takes several discernable sub-forms and contains a number of interesting questions. For example, as differentiation increases, the need for mechanisms that can accomplish accommodation between differentiated groups becomes crucial. (Perhaps language itself owes its genesis to needs arising from the functional differentiation of the neolithic tribe.) This sub-problem, which may be termed the problem of boundary establishment and maintenance, or the problem of intermediary culture, looms large in the history of education. Here, too, it is possible to identify movement along the differentiation dimension with movement along the formal/non-formal dimension. Roughly, formal education seems to be associated positively with degree of differentiation, while non-formal education seems to be associated negatively with degree of differentiation. In other words, the greater the degree of differentiation (of whatever sort) the greater the incidence, duration and frequency of formal education.

The Problem of Technology

A considerable amount of historical study is given over to the analysis of the formative influence of technology upon social organization and practice and upon ideology. Education, as a social practice and, often, as an ideological vehicle, needs to take account of technology in a careful and comprehensive way. The simplest view is to take technology as a global concept, typing societies and historical epochs in terms of the degree to which technology is manifest. There are, however, some good reasons to suppose that technology, itself, needs to be treated along two dimensions.

First, we can talk about technology in terms of the ratio of machine to human energy that is fed into a system. We can discern a movement between the extremes of zero machine energy/total human energy to, at least hypothetically, total machine energy/zero human energy. (There is an additional artifact of some interest here, and that is the portion of total available energy actually consumed, since unused available energy, especially unused human energy, is often treated by historians in the same way that surplus capital is treated by economists. Leisure (surplus human energy) is, in these terms, related to "intellectual progress" as surplus capital is related to economic growth.) In general, we can notice that, as the proportion of machine energy increases, so does formal education. Too, formal education seems to increase as surplus energy increases--a particularly important point about which more will be said later.

Second, we can treat technology in terms of its forms. Transportation technology, for example, has often been analyzed from a formal perspective, citing the differences between population center clusters connected by road networks of equal valence, radiating (spokes from a wheel) forms of large central centers and peripheral centers diminishing in size in direct relationship to their distance from the center and the "beads-on-a-string" pattern that inheres in railroad and superhighway systems. The prevalent continuum in regard to technological forms is the degree of interconnectedness between technological components of a system. (Or, in somewhat

different terms, the continuum can be expressed in terms of the aggregate size of a total technological system.) Interconnectedness (or aggregate size) alone porbably fails to do full justice to the problem of technological form. As an example, there is, perhaps, a significant difference between mechanical and electronic technologies--a qualitative difference apart from the fact that interconnectedness and aggregate size are, usually, greater in electronic systems. At any rate, the significance of technological forms is sufficient to warrant distinct treatment. Such treatments are numerous, most of them advancing the notion that technological forms are, at least metaphors for and, perhaps, isomorphic models of, economic, social, political, cultural and, in our specific case, educational arrangements in any historical or geographic setting. There is substantial reason to believe that, as technologies increase in interconnectedness, education becomes increasingly formal.

The Problem of the Formation of Consciousness

Finally, educational history is repeatedly concerned with the processes involved in the formation of the modal ways in which people define their relationship to the physical world, to other people and to their own accumulated experience. These modes are commonly lumped under the rubric of "consciousness." The foundation of consciousness is an especially important problem for education, since educational efforts often seek to intervene at the level of consciousness.

If we discriminate between three "levels" of culture, in a style conventionally adopted by anthropologists--the levels of techno-economic systems, social structure and personality--we may notice that the process of shaping consciousness can, and does, occur at all three levels. It occurs as we internalize techno-economic arrangements so that they become isomorphs for psychological organization; as we acquire psychological structures and habits of behavior that allow us to function in a given social system and as we shape and

adjust our systems of beliefs in order to align them with the verbalized prescriptions, proscriptions and expectations of our group. The formation of consciousness can be seen to occur at all three levels, even if one level is held to be more "fundamental" than the others, since once a dynamic is set in motion the variables on which it operates have a reciprocal effect on one another. In most schemes that are applied to the consciousness problem, the techno-economic and the personality (or, sometimes, "ideology") categories are posited as the extremes of the continuum, with social structure occupying an intermediary position. Movement along the dimension of techno-economic to personality variables can be correlated with educational modes, since, in general, when the formation of consciousness takes place at the techno-economic level it is most frequently within the domain of non-formal education, while the formation of consciousness at the level of personality is most frequently associated with formal education.

These four problems are the recurrent subject matter of the paradigms presented here. Not every paradigm will deal with all four problems and, sometimes, the role of the problems may be somewhat obscure since the structure of problems is, to some extent and ad hoc formulation, arrived at as a result of and not in order to design the inquiries reported here. They form, nevertheless, a superstructure to which, directly or indirectly, these historical investigations can be related.

CHAPTER IV

EDUCATION AND CULTURAL EVOLUTION

One of the recurrently striking facts about the historical movement of cultures is the coincidence of formalization of educational provisions and such cultural phenomena as increasing differentiation in political and economic affairs, the growth, both in size and pluralism of geo-political units, the expansion and complexity of economic systems and so on. That coincidence is a staple target of historical analyses in education or, at least, a uniformly noticed fact. It is, indeed, a fairly standard and eminently respectable program of historical inquiry in education to, first, delineate the correlations between educational formalization and cultural evolution (or, in a more common, but rather arrogant formulation, between educational and cultural "progress"). Once correlations are identified, a second level of research program comes into play--the explanation of those correlations. Both of these enterprises have been approached in various ways and with differing degrees of success by a large number of educational historians. For the most part, the identification of functional relationships between education and culture and their explanations seem unsatisfactory, especially when they reflected against the mirror provided by the concept of non-formal education. They seem unsatisfactory for several reasons.

Since most educational historians give primary (and, in many cases, exclusive) emphasis to schooling, they fail to take into adequate account the educational contexts that predate or coexist with schooling. In many cases it is as if schools come into being in order to meet educational needs that arise de novo, with no

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antecedents. Because of this habit of ignoring the genetic setting of schooling, the "explanation" of schooling and its correlation to cultural change is usually treated in terms of the content and administrative structure of schools, rather than in terms of evolutionary adaptation to changing conditions. Explanations advanced tend to be "mentalistic"--they center upon the shape and quantity of intellectual activity in the society, especially upon the state of literacy in a given social or historical context. Butts, for example, finds the main engine for formalization of education in the expansion of literate culture.

> *It must be inferred that the transmission and spread of a written language, organized knowledge, and predictive science rest upon some formal means of education.*[1]

This correlation, while it is an important one, and will be treated further on, does not have an adequate range of explanatory force. First, it does not account for wide variation in educational formalization among literarily similar cultures. Second, it does not deal with the question of what mechanisms in more differentiated societies "call forth" educational formalization as a response. This is not to suggest that educational historians have not provided a detailed record, along with some interesting theoretical constructions, for treating the evolution of the school as an institution. They have, perhaps because precisely that has been their central endeavor. All that is suggested here is that the treatment of the *process of formalization* has been inadequately dealt with.

This discussion does not purport to be a comprehensive treatment of the formalization process--space is too limited and the knowledge base too small for that. Rather, the effort is directed toward the exposure of problems involved in the study of formalization and the presentation of a few theoretical constructs that, at this point, appear promising in the further investigation of the problem. This analysis is based mainly on the work of historians and anthropologists of a meterialist persuasion and there is no question that attractive theories can also be extrapolated from other theoretical perspectives. The important thing is not so much

the adoption of one or another theory as it is the recognition that an adequate explanation of the crude, but persistent, correlation between cultural differentiation and the formalization of education requires careful attention to the formative dynamics of economic, political and social change as those dynamics act upon and react to educational contexts and practices that we might label "non-formal." It is, perhaps, in the subtle interface of "formal" and "non-formal" education that the problem of educational evolution can most productively be located.

This discussion will take up four attributes of cultural evolution that seem to hold some explanatory power for the question of educational formalization: two--the identification and formation of elites and the maintenance of ideological uniformity--stem from the emergence of the state; one--the symbolization of behavior and information--from the brute fact of systemic size; and a fourth--the management of surplus energy--from techno-economic change. First, however, it may be worthwhile to present in greater detail the theoretical and methodological choices that inform the later treatment.

The introduction of the idea and the facts of "non-formal education" into discourse about education and educational planning has a number of interesting and important consequences. Among those is the potential of the idea for raising the question of whether other patterns of education than the familiar one of schooling can be studied, planned and implemented. We are, to be sure, aware that a great deal of education takes place outside schools. We may even be willing to admit that some out-of-school learnings are equally as important as in-school ones. But, for the most part, we have dealt with non-school education through disclaimers. In talking about education and such topics as the role of education in economic and cultural development, we start with schools. Then we may say, "Of course, schools are not the only educational agencies," and then return again to our talk of schools. If someone asks about the

educational system of a nation or a community we take them on a tour of schools. We do not take them into the homes where language acquisition and primary-group socialization takes place, nor into the streets and countryside where self-concepts and socio-cultural roles are acquired and tested, nor into the marketplaces where consumer skills and attitudes are formed, nor into the work places where occupational capabilities, class consciousness and patterns of economic thinking are formed. We do not take them to playgrounds, union meetings, shopping centers, cocktail parties, craftsmen's shops, military installations, farms, factories, courts of law or the other many places with major, identifiable, educational dimensions. What the elevation of non-formal education to the status of an object of systematic investigation does is to require us to take the disclaimer seriously--to remove the schooling blinders from our educational vision.

One thing that is required for the treatment of non-formal education is a re-examination of the perennial question of how to study education. Ways of studying education have to be devised that can *accommodate* non-school educational events and processes, rather than just assigning them to a conceptual limbo that is vaguely recognized, but not treated theoretically. The major theoretical perspectives on educational phenomena are applicable almost exclusively to schools. Theories of educational administration are not concerned with choices among different modes of education but with changing and managing schools. Educational psychology is, for the most part, the adaptation of the theories and findings of general psychology to the special environment of the classroom. Educational philosophy deals with the clarification of linguistic formulations that occur with the context of schooling and with the formulation of systematic normative views of what schooling should be, while historical studies deal mainly with the ideas of normative philosophers of education and with the historical evolution and development of schools and general types of schooling, along with efforts to explain schooling types in terms of

historical variables. While these school-centered theories may have utility and even a high degree of validity in regard to the school they do not *necessarily* have an automatic transfer to educational contexts *other* than the school. To overlook this fact is to dissipate the "explosive" potential that the concept of non-formal education has for the theoretization of education generally. Furthermore, if the development of study and practice under the rubric of "non-formal education" does not proceed from a thoroughly reconsidered conceptual framework, there is a very real probability that planning and practice in "non-formal education" will embody the schooling mode as an unexamined assumption. This seems to happen, for example, whenever some learning, presently located in a non-formal arena, is brought forward as an object for organized and deliberate education. Initial language learning is a good example in current deliberation about American education. If the problem is raised in the absence of a comprehensive conceptualization of education, the tendency is to impose a schooling structure on it--to suppose that what we ought to do is to "teach" initial language in a "pre-school" environment.

The articulation of a way to study education that has the scope and power to treat the idea of non-formal education is a complex undertaking--one that has several possible dimensions and, undoubtedly, a number of thinkable variants. The present study attempts to organize the inquiry along the lines of a search for similarities between educational arrangements and extra-educational variables. This is by no means a novel approach, nor, until there are specifications of both a typology of educational arrangements and of the particular cultural and historical variables to be examined, does it have much shape. Since the choice of historical and cultural variables involves primary strategic decisions, that issue will be treated first. The choice of variables centers first on the general problem of finding a fruitful way to study education

and, second--on a more specific problem--is it possible, on the basis of an analysis of the cultural and historical features present in a given case, to make informed judgments about the relative effectiveness and appropriateness of locating some educational function in one or another possible agency? Put another way, this second problem (which provides the "practical" dimension of the study) is that of *fit* between a particular context (described in cultural and historical terms) and an array of educational modalities, in light of some stipulated function or objective. Given an educational objective, along with a context--the set of cultural and historical conditions in which it is to be pursued--do similarities between that context and other historical instances indicate some superiority for one educational modality as against others? With those two problems in mind, let us turn to the question of what suppositions about the study of culture and history inform this analysis.

Education as a Dependent Variable

A first major decision is whether to treat education as reactive or as proactive (or both). There are major traditions of analysis of both sorts and, in point of fact, most historical investigations take a composite view, holding that education is both shaped by, and acts to shape, other components of culture. That is probably the view that has the best chance of doing full justice to the facts and it provides a useful tool for comprehensive hsitorical explanations. For example, the labor marketplace influences vocational education and, in turn (especially in times of labor shortage) the character of vocational education has some impact on the labor marketplace. There are some problems with a composite view, however. While it may supply good historical descriptions and explanations, it does not allow for very clear interpretation of information for purposes of prediction. "Why" questions tend to be answered with a not-very-illuminating, "well,

either one or the other or both." Second, it builds in circularity and an almost inevitable infinite regress. If we wish to influence vocational education we should influence the labor marketplace first, but, on the other hand, if the labor marketplace is in part a product of vocational education, perhaps we should begin with vocational education and so on, ad nauseum. This is a familiar quandary for educators and it results in part from a failure to begin with a commitment to taking either a proactive or a reactive view and following it out to its investigative limits, in order to see what its theoretical credentials may turn out to be.

The situation is compounded, at a different level, by a frequently intense desire on the part of educators to see their work as formative and proactive. Although that desire may be rooted in altruism and a commitment to social activism, it can seriously distort the effort to attain conceptual clarity. When the self-concept and ideology of the educator becomes a significant determinant of conceptualization, the result is almost sure to be confusion. This comment is not intended as a plea for a "value free science," but only as an admonition to liberate our methodological decision making, to the fullest extent possible, from the ideologies that bolster our practices.

For reasons that will emerge later in the discussion, this analysis proceeds on the supposition that education is almost always reactive. Educational patterns--their character, their emergence, their maintenance and their decline--are taken to be the products of non-educational variables and of changes in those other variables. In conventional research terms, educational patterns will be treated as dependent variables and other components of culture as independent variables. We will return shortly to the question of what independent variables are to be treated and in what fashion.

An Evolutionary Viewpoint

A second decision involves two dimensions. First, shall educational phenomena be treated as isolated in time or as events in a process. That is, should the view taken be synchronic (isolated in time) or diachronic (processual)? This is not a difficult question here, since historical study is, almost by definition, a diachronic enterprise. It is not so much interested in freezing, for inspection, a set of events or an educational or cultural type, as in finding processual configurations in which events and types are parts. The case for diachronic analysis is strengthened when, as a determinant of assumption making, there is some concern with development and change, such as that posed here by the problem of locating function. Change, as a process, can best be approached through understandings of processes.

Once the decision to focus on patterns of process is made, the second question arises--that of how process is to be construed. Should the objects of investigation be regarded as being rather closely bounded by locale, historical epoch, economic type and so on, and treated in relational, rather than causal terms? Or should the components of process be approached as parts of overarching patterns of high generality in which causal patterns may be identified? (In conventional terminology, should the approach be idiographic or nomothetic?) This is a considerably more difficult issue, and one in which there is considerable merit on both sides. A particularistic view has the capacity to treat and theoretize highly precise and detailed data, but it runs the risk of obscuring or missing general patterns that might enhance the utility of theoretical formulations, especially in applications that involve the derivation of predictions and planning decisions from identified similarities between present and other known situations. A general view has the power to reveal and integrate similarities, but builds in the possibility of overlooking differences of detail that may influence comparison-based applications.

The investigation, while recognizing the merit of particularistic inquiries, will take a generalist and causal (nomothetic) posture. The decision is based partly on the infant character of the study of non-formal education--general frameworks seem necessary as a condition of identification of the domain of the concept--and partly on the inquiry requirements of the concern for making judgments about the appropriateness to specific projects of different educational patterns. The methodological position taken here, as well as the reasoning behind the position, reflect the formulations of Marvin Harris. Harris cites, as an advantage of the nomothetic approach, its adaptability to precisely the sort of problem that is here termed the problem of location of function:

> *As a causeal, as well as diachronic and synchronic model, the economic-structural-ideological concentration provides the basis for stipulating the more or less durable and influential parts of the system. This provides, in theory at least, some prospect of being able to discern degrees of functional effectiveness or "fit," as between an innovation and an older element in the system.*[2]

The position taken here is basically an evolutionary one. It takes educational patterns to be adaptive responses to changing *material* conditions. Different educational modalities, then, are the result of cultural adaptations based in evolutionary dynamics. The evolutionary approach to the study of cultural phenomena has been argued at length and in detail by Harris and it is worthwhile to cite some of the main conclusions of his analysis here. Following a plea to regard anthropology as the "science of history," he writes:

> *The burden of my argument is that the basic principle of a macro-theory of sociocultural evolution is already known. This is not to say that it is known in the form that is familiar to us from physics--as the Newtonian laws of motion, or as the laws of quantum mechanics--but rather in a fashion that closely approximates the kind of principle that has governed research in evolutionary biology since the time of Darwin. The kind of principle to which I refer, in other words, has its precise analogue in the doctrine of natural selection. In this analogy, the meaning of "principle" is not equivalent to the statement of the specific "laws" of evolution, but rather to the statement of a basic research strategy, from the application of which there is an expectation that a nomothetic causal understanding of sociocultural phenomena may be achieved.*[3]

What we wish to ask, of different educational modalities, is the question of what the environmental conditions were to which the modalities were adaptive responses. Then, given similar environmental conditions, we may predict, or even plan for, the emergence of similar educational patterns.

It is now possible to locate schooling within a context of education, broadly conceived. The school may be regarded as an evolved form that, like any other form, is a specific adaptation to describable material conditions.

There is a necessary caveat, to the effect that the above formulation is applicable only to "columnar evolution," in which one stage leads to another.[4] We should not neglect interpretations of a "branching" kind, in which a pattern is an adaptation to a particular set of circumstances and not a transition to some further stage. In a general evolutionary scheme, branching and non-transitional forms are important, if for no other purpose than their capacity to serve as explanata for the lack of universality in general evolutionary theories. Efforts must be made, to the extent possible, to identify forms and stages in terms of their status as transitional states, in order to clarify general theory and, at the practical level, to identify stages that, because they are not transitional, are inappropriate to transition-intending planning. Still, the main burden of the present analysis is the examination of the possibility of formulating an evolutionary theory of educational forms and the transitional character of educational patterns will form the central focus.

Another problem that must be addressed in an evolutionary framework is that of whether evolution is multilinear or unilinear.[5] Is there one, or more than one, identifiable pattern of cultural development? In its most basic form this is a statistical argument and, sometimes, an argument about statistics. What is the strength of postulated similarities and what strength of correlation must be present in order to call a correlation a "similarity?" Without examining that argument at length, this analysis will accept the

hypothesis that cultural evolution is multilinear, a conclusion that is taken by Harris, following Steward and Wittfogel. Historically, the conclusion arises from the failure of attempts to formulate a single evolutionary scheme that would adequately account for both the feudal, nucleated and personalistic cultures of Northern Europe and sub-Saharan Africa and the centralized, bureaucratic and communal societies of Asia, Northern Africa and Meso-America. The work of Steward and Wittfogel, based in a distinction between the cultural dynamics established by hydraulic agriculture in the latter societies (high population density, centralization and so on) and those associated with hunting, gathering and dry-land agriculture in the former (snarse population, shifting and dispersed social and political ties and so on) indicates at least two major patterns which may, in general, be termed "Eastern" and "Western" cultures.[6] This point, while it remains somewhat controversial, has a substantial weight of evidence in its support and is an especially important one for the general problem of planning change and development, since it raises serious questions about the transferability to "Eastern" cultures of "Western" practices. Although the implications of the distinction will not be a central focus here, it merits recurrent attention and sustained, intensive analysis.

With the stipulation that the historical study of non-formal education should treat education as a dependent variable within an evolutionary perspective, it is possible to turn to the question of what sorts of extra-educational variables may be treated.

Technology and Culture

In searching for the relationship between educational variables and others, there is a diversity of possible structures of variables, all of them vested with at least some plausability and supported by a number of adherents. It is possible, for example, to take "personality" as an explanatory base (independent variable) and explain all other features of culture as manifestations of

personality. This program, characteristic of Ruth Benedict and Margaret Mead, following Franz Boas, finds, in personality, a cause for economic, social, educational, artistic and other cultural phenomena. Personality, especially group personality--"national character" or "spirit of the age," exemplified in Benedict's famous Dionysian and Appolonian categories of group personality--is the object of research and theoretization. Attractive as personality and culture may be, it presents major problems for an evolutionary perspective, since to place it in an evolutionary context it is necessary to ask what evolved personality is--an effort that has produced a great many stubborn dilemmas and an enormous amount of silliness. (Indeed, Boas and his followers took the turn of denying the validity of an evolutionary approach to culture, freeing themselves of the necessity of talking about evolved personality.) Historical studies provide a range of focusing variables, from "spirit of the age" types, through aggregate cultural types, such as R. Freeman Butts suggests when he argues for "civilization building" as an organizing concept for the comparative and historical study of education,[7] or Turner's familiar frontier hypothesis (which, in its application, is multi-dimensional, despite a tendency to give priority to an economic base), to narrow Marxist economic interpretations.

The perspective of this investigation is chosen for its compatibility with an evolutionary strategy and, to a lesser degree, because its explanatory use seems, consistently, a bit more convincing and parsimonious than that of other perspectives. The thesis can be stated fairly simply: cultural phenomena (including educational ones) can be understood and explained as consequences of the action of the techno-economic environment upon social organization and ideology. Technology, in this case, is intended as a comprehensive term, rather than in the narrow meaning it sometimes takes--that of sophisticated, machine-based modes of industrial production. The use intended here is consistent with that given by Marx to "modes of production,"[8] or, more recently, to Marshall McLuhan's

conception of "technology."[9] In addition to machinery, "technology" may include the nature and distribution of wealth (hence, "techno-economic") and all forms of energy management--agricultural fertilizer and irrigation, road and other transportation systems, techniques of value and commodity exchange (markets, money, credit), communication techniques and so on.

This is not a novel hypothesis. It is characteristic of a long tradition in historiography and anthropology. Harris, building on the work of Leslie White and Julian Steward, has provided a recent and extensive formulation of the view that technology, broadly construed, is a powerful tool for the explanation of culture. Harris casts his approach as a reformulation of White's "Basic Law of Evolution." That "law," as set out by White, says:

> *Other factors remaining constant, culture evolves as the amount of energy harnessed per capita per year is increased, or as the efficiency of the means of putting the energy to work is increased.*[10]

Harris reformulates White in the following way:

> *It is this reformulation which actually deserves our greatest attention, because it amounts to nothing less than a statement of the research strategy through which one proposes to arrive at the formulation of the most productive statements of diachronic and synchronic regularities. This is the strategy which often reluctantly acknowledges its debt to Marx: The most powerful generalizations about history are to be found by studying the relationship between the qualitative and quantitative aspects of culture energy systems as the independent variables and the quantitative and qualitative aspects of the other domains of sociocultural phenomena as the dependent ones. It needs to be emphasized in this context that the meta-generalization embodied in the cultural-materialist research strategy is fully analogous to and at least as well vindicated by specific cases as the vaunted "principle of natural selection" in biology.*[11]

It should be noted here that a second element of Harris' research strategy--the formulation of propositions about the cultural impact of technological conditions into statements of covariance that can be tested statistically--will not be developed in this analysis. This is not because the construction of covariance comparisons is not important--it most assuredly is--but because the data for such

studies is not available to this study. What will be attempted here is a general inspection of educational modalities in terms of the techno-economic variables along with a cluster of analyses of specific educational problems and contexts conducted in techno-economic terms.

Technology, Social Organization and Ideology

If technology is taken as the primary determinant of culture, where, in general, shall we look for its effects? More specifically, is there a way of organizing the diverse data that constitute "culture" that will allow for a systemic inspection of the effects of techno-economic orders? A general convention has characterized the work of White, Steward and others in their tradition--the tradition that Harris calls "cultural materialism." That convention divides the whole of culture into three broad categories--technology, social organization and ideology.[12] "Technology" is, as already noted, a covering concept for material conditions. "Social organization" covers networks of formal and informal relationships between individuals and groups, relations of super- and sub-ordination, obligation and reciprocity and so on. On a cultural-materialist view, these relations emerge as a methodology for the successful accomplishment of techno-economic imperatives. Kinship systems, governments, caste systems and social class systems provide examples of social organization. Finally, ways of organizing for techno-economic purposes are abstracted and shaped into myth, ritual, tradition and psychological configurations ("personality"). This is the realm of ideology and in it are located many of the data in which historians and cultural anthropologists are most interested. The cultural materialist posture regards alterations of material, techno-economic conditions as the primary change models.

Three Modals of Change

Although the emphasis in this study is on the relationship between techno-economic variables and educational patterns, and

although evolutionary patterns are held to be based in technology, it may be worthwhile to discuss briefly the problem of conceptualizing change in light of the technology-organization-ideology categorization. It is theoretically possible to construct the change process in terms of an intervention at any one of the three postulated levels. Thus, one might attack problems of a techno-economic sort through attempts to change ideology. This is a fairly familiar doctrine, often phrased as "in order to change (x) we must first change the minds of men." It is especially familiar to educators, since schools are frequently charged to work ideological changes that are supposed to secure at least eventually, altered material conditions. An excellent historical example of the adoption of an ideological change model is to be found in the Progressive movement in American education. (The currently fashionable "Human Potential Movement" has much the same assumption in regard to change as did Progressive education, as well as a number of common textural elements.) Although Progressivism had a number of dimensions, several of them techno-economic in character, education was one of the most popular vehicles for the reform effort, especially in the case of John Dewey and Deweyians such as Harold Rugg, William Heard Kilpatrick and John Childs. The Progressives sought to alter what they saw to be the evils of unfettered industrial capitalism by devising educational techniques for the accomplishment of a more egalitarian, "democratic" ideology. There is a fairly extensive consensus, much of it centering around the analysis of Progressivism given by Lawrence Cremin,[13] that that effort failed. The precise reason for the failure is not so important as the hard fact that that fairly massive attempt to obtain reform through an ideological model had very little consequence, either in education or the wider society.

It is also possible to model change at the level of social organization. The operating premise is to the effect that, if social arrangements are altered, changes will occur in both the techno-economic and ideological spheres. This is the working

premise, at least covertly, of a great many cases of attempts to initiate change. The idea of the common school is firmly rooted in the notion that a forced change toward an egalitarian educational form will, more or less automatically, produce both a transformation of "national character" in an egalitarian direction and important changes in the base of economic and occupational distribution. Racial integration of schools, as a special sub-case of the common school strategy, is another excellent example. A social-organizational model of change is deeply embedded--at a near-mythic level--in the ideological tradition of liberalism. International assistance, too, frequently has looked as if it were based on the assumption that the introduction of social organizational patterns characteristic of advanced cultures will somehow contribute importantly to the alteration of the economic base toward "modernity" and industrialization. The track record of attempts to foster change through an organizational model--one is tempted to call it an administrative model, since there seems to be a powerful impetus for administrators to respond to problems by changing the organizational flow chart--is, at very best, mixed. At worst--as, for example, in Christopher Jencks' recent evaluation of the results of the common school idea[14]--the results are almost utterly discouraging.

Ideological and social-organizational forms may be regarded as secondary models of change. The fruitfulness of both forms may be subjected to serious question, although there is probably inadequate evidence to reject changes worked through secondary mechanisms. Even so, a great deal of dissatisfaction with conventional secondary models, such as ideological schooling and political reform, seems rooted in a questioning of the capacity of secondary measures to accomplish changes in the techno-economic sector. Balanced against that is the accumulating evidence, discussed at length by Harris,[15] in support of the cultural-materialist model. Without denying entirely the viability of secondary models, the main focus of these remarks will be on the previously discussed process, in which changes in techno-economic arrangements generate changes, first at the level of social organization and, second, at the level of ideology.

Energy and Its Management

It is possible to construct a cultural typology on the basis of energy present within a system. Energy, however, is an extremely abstract concept, and one that embraces a very wide range of phenomena. It becomes necessary to operationalize the concept in some way that preserves a degree of generality but provides a more concrete object of inspection. Eric Wolf, in his work on peasant societies, has used the notion of "fund" in a way that seems to coincide, roughly, with White's notion of "energy."[16] For peasant societies, Wolf distinguishes three orders of funds: replacement funds--those used to maintain a given level of subsistence; rent funds--those funds paid over to land-holders for the use of land; and ceremonial funds--those expended for ceremonial purposes--in peasant societies, a primary mechanism for maintaining the economic equality upon which the system of mutual aid, necessary to the success of peasant agriculture depends. It is also possible to identify two other orders of funds present in systems having large energy components: investment funds--those that are expended in order to increase the size of the energy component in the system and surplus funds--those which are expended on "leisure" or "luxury" commodities. On this general view, "funds" may be regarded as abstracted energy and money as "symbolized" or "stored" energy.

Social units, then, can be characterized in terms of the kind and degree of funds available. In some societies only replacement funds are available--in general, the societies we might term "primitive." In other cases, as Wolf shows, possible funds are exhausted in replacement, rent and ceremony, leaving nothing for either investment or surplus. Finally, a society may have substantial quantities of investment funds. (Because surplus funds are a minor variable in most societies and because they pose special problems of analysis, they will not be given further consideration here.) In the peasant case, the rent-taking element of the total society has, of course, funds for investment and even surplus. The relationship between peasantries and rent-takers is, for Wolf, the crucial feature

of cultures that might be called "peasant societies." This simplified scheme, especially the characterization of societies in terms of their investment potential, is a staple of analysis for economists.

The continuum running from a balance between available energy and immediate consumption (replacement funds only) to societies in which investment funds are adequate to sustain regular expansion of the energy component may be divided, first, into extreme categories, such as "primitive" and "modern." It is also helpful, and consistent with several conventions of cultural, economic and historical studies, to introduce an intermediary position--one in which there are funds above the replacement level but not adequate to reach an investment level capable of sustaining consistent energy growth. That situation--which obtains in most of the world outside of Europe and North America--may be called "traditional."

The conventional division of societies into primitive, traditional and modern, is, in these terms, a division based directly upon funds and, through funds, on the energy variable. The categorization of social units--nations, regions, and so on--according to the state of funds is a fairly difficult, but not impossible task. For a further parameter of categorization, let us look at another dimension of energy management that is closely related to the continuum of funds.

As energy increases, and as it is abstracted, there seems to be a strong correlation with cultural differentiation. Specialization emerges, between individuals, between social groups and between different dimensions of an individual's life activities. The concept of differentiation is now a commonplace of historical and cultural research. Like funds, differentiation yields fairly readily to inspection and even quantification and it fits well with conventional primitive-traditional-modern typology. Primitive societies display little differentiation in either the intra-individual, inter-individual (intra-group) or inter-group realms, while modern societies show substantial differentiation in the more modern, urban sector.

Schooling and Social Complexity

In general, the more complex a society is, the more prominent and extensive schooling is in that society. This is true whether the complexity is geo-political, economic, cultural, class-stratificational or informational. Thus, a society with a complex structure of exchange has more "visible" education than does one with a simple exchange system; a society with a complex of machine energy, more than one with little or no machine energy; a state geo-political unit has more schooling than a tribal or simple city or village unit and a state that is interrelated with other states has more than a state (such as the pre-colonial Ashanti) that is a self-contained unit. A society with a multiple class structure, including a middle class, evidences more formal education than does a society with a simple bifurcation of elites and commoners, which, in turn, has more than a single-class society, and so on.[17] Strangely enough, this rather remarkable fact is such a commonplace that it has only infrequently been the focus of explanatory attempts by educational historians. For the most part, it is seen as being adequately explained as some sort of an inevitable consequence of the march of progress and civilization and has been regarded as less interesting than the ideological analyses to which the correlation of "progress" and schooling have been subjected.

The general construction of the reasons why schooling correlates so surely and so powerfully with social complexity locates the correlation mainly in three "imperatives": (1) the imperative to increase the literacy base of the society, since literacy is seen as a primary tool by means of which complexity is accomplished and managed; (2) the imperative to train workers for work that is more differentiated and, supposedly, more intellectually demanding, in complex, as against simple economic systems; and (3) the imperative to expand the ratio of people capable of getting and processing the information on which the making of political decisions rest, since increase in complexity is, in the view of most analysists, also correlated with an extension of political participation to more and

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more people. These three points encompass fairly well conventional explanations of the relationship between schooling and social complexity. They contain important truths and the purpose of these remarks is not to deny the validity of conventional explanations (although there are some major weaknesses in them, particularly in the second two listed) so much as it is to add to them a few propositions that also seem to have considerable explanatory power. It is probable that any adequate explanation of the correlation must be multi-dimensional and it is not suggested that what is presented here, even in conjunction with the conventional explanatory frame, constitutes an adequate explanation. We only hope to expand the enterprise of seeking an adequate explanation for the facts that, in our opinion, constitute the central and most important question for historical studies in education.

Management of Energy

While the hypothesis that economic systems require degrees of labor skills, and while some skills are of a sort that seem obtainable in a context of formal schooling, the general concept of necessary job-training does not seem adequate to explain the formalization of education, not even that portion of formal education that is clearly work-connected. The hypothesis can be refined somewhat by making a distinction between job skills that are amenable to formal treatment and those that are best acquired through some other mode, so that, for example, one does not end making the patently silly argument that a worker on a mechanized farm needs more "advanced" skills or more skills than a peasant farmer. Although that argument, silly as it is, is often made, it is not a necessary one. Rather, one might say that the mechanized worker requires more schooling-appropriate skills than does a peasant farmer. Now if it could clearly be shown that there is a rough equity between the increase of schooling--in this case, schooling that is overtly job-related--and the increase of requirements for skills that are treatable in the schooling model, then we could simply validate that portion of

the conventional wisdom and move on to other considerations. Unfortunately, no one has ever made that demonstration. In fact, even though that is a seldom-researched problem, what evidence there is seems to point toward the conclusion that, as economies become more industrialized and complex, the amount of schooling increases at a far more rapid pace than do school-treatable skill requirements.[18] Now, of course, much of that schooling is of a multiple objective sort--literacy is a good case in point, since it is held to be an objective with applications not just to employment, but to citizenship, culture and several other social goods. But even when a broader statement of objectives is not made, as in the case of quite specific job-training programs, or when crude allocations of total schooling are made to "job-related" and "non-job-related" categories (as may be done by gross comparison of "general" and "special" components of college degree programs) there still seems to be a considerable amount of schooling that cannot be accounted for by the skill imperatives of the labor marketplace. Some additional explicandum seems necessary in order to account for the excess of schooling over the skill requirements of the economy.

One useful addition to the conventional wisdom lies in the notion of energy management. What is suggested is that increases in the proportion of machine energy to human energy (of "technology" to "labor") creates a social imperative for the management and custodianship of labor that is removed from the economy through replacement by technology. This is, of course, not a novel insight. In the developed nations the specter of "technological unemployment" has been with us for a long while. In abstract terms, technological unemployment is a result of increasing technological energy inputs at a rate that exceeds the gross growth rate of the system's energy requirements. (A useful, but presently unavailable, tool for educational planners might be an index that would provide a rate of technological increase against rate of growth in total energy demands.) In more concrete terms, when an economy industrializes, excess labor is often generated. When that happens, some measures must be taken

to manage that surplus energy so that it is not discharged in socially dysfunctional ways.

With the concept of energy management as an analytic perspective, it is possible to identify a fairly large number of historical measures that can be interpreted as energy management devices. Recent trends toward shortened work weeks, longer vacations and early retirement come readily to mind, since they channel surplus labor energy into the (hopefully) neutral arena of leisure activity. A similar case can be made for the increased willingness of high technologies to accept, as a social cost, the payment of "welfare" (a very different thing than charity) to the unemployed and to tolerate a much-expanded notion of "unemployability," even though this is a fairly weak management strategy, since it channels surplus labor energy into idleness, with attendant psychic costs to the recipients and potential danger to the social system. Programs of "social labor," and "public works" such as youth service, and government-supported jobs for the unemployed constitute another variety of energy management with a considerable number of historical applications. Finally, the school is an agency that is admirably suited to the energy management imperative, especially schooling of the wort that is vague, ambiguous and indirect in its relationship to future employment. Building on the base of a kernel of real increase in schooling requirements, it is possible to inflate the relationship between schooling and economic welfare and to bring under the control of the school an enormous amount of potentially dangerous human energy. In the school that energy can be channeled, manipulated, and "bled off" into functionally neutral activities, rationalized by arrhetoric that associates those activities with life's economic chances. When that sort of program is backstopped by a system of opportunity allocation that is heavily weighted in favor of school-acquired credentials, a society has a powerful instrument for managing excess labor energy. The system can be expanded in its temporal dimensions--by lowering the school-entry age and/or raising the school-leaving age--and in its distributional dimensions--by

requiring more people to go to school, by increasing the number of jobs for which educational credentials are required and so on. It is also a fairly effective "fail-safe" mechanism, since when conditions alter and labor requirements increase schooling can be fairly easily diminished.

There are numerous historical instances of the use of schooling as a labor management mechanism--the rise of the American Common school in the early nineteenth century and kindred developments in other Western industrial economies; the device of the G.I. Bill for sponsorship of education during the post-war recession in the late forties, which had as one of its effects the subtraction of a great deal of the potential labor of returned servicemen; the explosive increase in college enrollments in the late fifties and sixties, when the massive changeover to electronic technology was taking place; the growth of the high school during the surplus labor conditions of the thirties and so on. What is suggested here is that the relationship between schooling and complexity in the labor sphere is more adequately explained by a framework that adds energy management to the conventional wisdom of increased skill requirements than it is by the conventional explanation alone.

Symbolization

It is not necessary to dwell very long on the contribution that symbolization makes to the expansion and formalization of schooling, since that is one point on which the conventional wisdom provides a fairly powerful explanatory. The only important point has to do with the location of symbol construction, dissemination and utilization in the growth of complexity, in order to give a material base, freeing it from mentalistic doctrines of "progress" more appropriate to Enlightenment thought than to modern social science. Simply put, as the entire behavioral and substantive content of a society becomes larger, a point is reached at which there is more information within the boundaries of the system than can be possessed by any individual or constantly communicating

aggregate of individuals. If the system is to maintain cohesion, rather than breaking apart into what might be called "primary information" units of manageable size--that is, into units where all necessary information can be conveyed and possessed by primary techniques such as telling, pointing, showing and so on--then the existence of the system depends on the expression of some of that information in symbolic form.[19] A symbol, as against a sign or some simpler form of information, has its status in meaning by virtue of its conventional meaning. A printed word bears no physical resemblance to the thing it symbolizes and one cannot know what it symbolizes without some introduction to the conventions that govern its meaning. This is true of ritual symbols and other conventionalized systems of meaning (including spoken language, but spoken language is, probably, a special case because of its fundamentality and deserves a distinctive treatment which will not be attempted here.) In any system that requires symbolization for its survival, then, some mechanism for the dissemination of the conventions of symbolization is imperative. If the role of symbols is extensive and the need for familiarity with conventions a persistent one of substantial priority, an agency is established to perform that task and that, in its historical genesis, provides the most basic account of the origins of schooling. The paradigmatic school is precisely a differentiated agency for the transmission of the conventions that govern the use of symbol systems.

Not only is the transmission of conventions the root function of schooling, but it also provides a powerful shaping force on the ritualized conduct of schooling, even when some other objective is at issue. It is fairly typical of institutions that the genetic paradigm, the primitive metaphor, around which the institution is organized pervades all of its activities, wehther or not those activities are, in fact, members of the class of activities that are "native" to the paradigm. (Indeed, one major meaning of the concept of "dysfunctional" institutional activities may be seen as the application of the primitive metaphor of the institution to activities

for which it is ill-suited.) This is, not surprisingly, true of the schooling paradigm, and whatever tasks are assigned to the school tend to get treated as if they were tasks of introduction of neophytes to symbol systems.

There would, then, seem to be two fairly important tests to apply to the appropriateness of schooling in any context. First, does the system in question possess sufficient behavioral and informational complexity to warrant the expression of information in symbols (is schooling an appropriate institution in that system) and, second, for a given educational task, is the task one that is appropriately regarded as an exercise in the transmission of symbol-governing conventions (is the educational task a "schoolish" one). In attempting to explain the correlation between complexity and formalization of education, it may be fruitful to give careful attention to the status of informational mass in the system in terms of the extent to which an imperative for symbolization is posed.

The State: Elites and Uniformity

The formalization of education is, in almost every historical instance, a correlate of the emergence of the state as a mode of political organization. Since the concept and the fact of the state is a comprehensive and multi-dimensional one, there are, undoubtedly, a number of useful explanatory notions contained in that correlation. We will consider two--the pressures created by the state for the development of a governing strata and those pressures that demand the creation and maintenance of ideological uniformity.

The state, in this instance, is taken to be an organizational form in which two or more culturally diverse sub-units are bound together in a single geo-political unit in which at least some of the affairs of all sub-units are governed by a standard set of regulatory measures. Furthermore, the state, as an organizational form, exists only when characteristic modes with the sub-groups for the conduct of governed affairs are not mutually compatible--that is, when contradictions between the contained sub-groups exist. The

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genesis of the state is, as Georges Balandier puts it,

> *the search for different processes by which inequality is established and by which contradictions appear within society and necessitate the formation of a differentiated organism whose function is to contain them.*[20]

The state, then, generates structural imperatives, some of which can be related to schooling and used as explanatory frames for the relationship between complexity and educational formalization. Cohen states the case succinctly in the following passage:

> *Although states vary considerably in the extent to which they succeed in establishing firm boundaries, they all strive to do so. There are three notable characteristics of firm boundary-fixing: role transposability, the inability to tolerate sustained and outspoken dissent, and the lack of differentiation of networks within the unit itself.*
>
> *When a network is very firmly bounded, roles within it are highly transposable in respect to the activities of that network; that is, its members can assume each other's roles of substitute for each other in meeting the goals of the group. . . .*
>
> *A second notable characteristic of boundary systems is that there is an inverse relationship between the firmness of a unit's boundedness and its ability to tolerate sustained outspoken dissent by any of its members. . . .*
>
> *The third notable characteristic of the degree of boundedness of a network is the amount of differentiation of subunits within it: the stronger the boundaries maintained by a network the weaker are the boundaries maintained by its component subsystems and the more homogeneous its membership. . . .*
>
> *Thus, mass education in a civilizational state has to be seen as a manifestation of two cross-cutting principles. The first of these is the civilizational state's need to train an elite who will fill the boundary roles in addition to ruling within the society; this is an adaptive outgrowth of the pressures engendered by the civilization as a network. The second of these is to establish ideological uniformity throughout the society by eliminating local boundary systems which can serve as the seed beds of particularistic and antistate symbol systems; this is an adaptive outgrowth of the pressures engenedered by the state per se. In other words, elite education is an adaptive response to the pressures generated by a society's participation in a civilizational network; mass education is principally a response to the forces stemming from civilizational and state pressures in juxtaposition.*[21]

Cohen's analysis, while tied to the concept of a "civilizational state," a state that is itself a sub-unit of a larger civilizational network, is applicable to the problem of the state as such. In the presence of different (and contradictory) sets of practices, social, political and economic cohesion depend upon mechanisms to mitigate those differences. One such mechanism is an overarching governmental structure, personed by a ruling elite, to which differences are submitted for adjudication, arbitration and accommodation. Some agency for the identification, training, socialization and certification of such elites is a necessary adjunct to the existence of the state. Here, too, the school (along with a number of mechanisms) serves to perform an office that, far from being capricious, as some analysts would have it, is rooted in the material requirements of the socio-political structure. This characteristic of schooling is, perhaps, second only to symbol dissemination in its pervasiveness in schooling and in its primitive relationship to the schooling paradigm.

The second of Cohen's "cross-cutting principles" centers upon the imperative, in a state, for mechanisms that will guard against the development of sub-units of sufficient boundary strength to enforce the maintenance of behaviors that are, in Balandier's term, "contradictory" to behavior in other sub-units of the state system. The imperative, in a phrase, is for "ideological uniformity." The absence of ideological uniformity creates situations that are potentially dangerous to the hegemony of the state and history is marked by a variety of measures taken by states to assure that uniformity, ranging from brutalization of "deviants" to sophisticated media manipulation. The school has, of course, been turned to that purpose. (It should be noted, however, that the casting of political socialization in a catechetical mold--that is, in the ritual of symbol transmission--would seem to put ideological uniformity at least one level away from the genetic paradigm of schooling. In fact, that contention may be observed in the temporal development of schooling, with political socialization

almost always occurring later in development than either symbol transmission or credentialling.)

We can, then, add to our conventional explanations of the correlation between complexity and schooling the explanatory notions of energy management, introduction of conventions of symbolization, the identification, development and certification of elites and the pursuit of ideological uniformity. Even then we may not have a fully adequate theory to account for the observed correlation. We might, however, have a *more* adequate theory, one more clearly based in theory drawn from the social sciences and, hopefully, one that may prove to have some utility for educational planning. In general, the relevance of this analysis to the problem of non-formal education lies in the sorts of judgments that may be derived from it for making decisions about the appropriateness of schooling in a given problematic context. If the context seems to involve, to a substantial degree, action on one or more of the imperatives given here, then schooling may be an appropriate strategy. If, on the other hand, the context seems weak in terms of these imperatives, non-formal approaches may be more appropriate. For example, if a development scheme does not anticipate sufficient introduction of machine energy to displace labor, then there would seem to be little point in instituting formal schooling as a job-training strategy. Or, in another case, if the future does not seem to hold the prospect for marked expansion of the information store in a social unit, there would seem to be little reason to introduce symbolization as a major educational component. This is a crude and, almost inevitably partial kind of decision-making apparatus but it may have some merit, especially where data and techniques for the construction of more refined and precise decision models are not available.

NOTES: CHAPTER IV

1. R. Freeman Butts, "Civilization as Historical Process: Meeting Ground for Comparative and International Education," in *Education and Comparative and International Perspectives*, edited by Kalil J. Gezi (New York: Holt, Rinehart and Winston, Inc., 1971), p. 28.

2. Marvin Harris, *The Rise of Anthropological Theory* (New York: Thomas Y. Crowell Co., 1968), p. 235.

3. *Ibid.*, pp. 3-4.

4. See Harris' discussion of this point, *ibid.*, pp. 647-651.

5. *Ibid.*, pp. 642-644.

6. *Ibid.*, pp. 671-683.

7. Butts, *op. cit.*, pp. 17-34.

8. Karl Marx, *The Grundrisse*, edited and trans. by David McLellan (New York: Harper and Row, 1971), pp. 16-33.

9. Marshall McLuhan, *Understanding Media* (New York: McGraw-Hill, 1964).

10. Leslie White, *The Evolution of Culture* (New York: McGraw-Hill, 1959), pp. 368-369.

11. Harris, *op. cit.*, pp. 650-651.

12. *Ibid.*, pp. 230-231, 660.

13. Lawrence Cremin, *The Transformation of the School* (New York: Alfred A. Knopf, 1969).

14. Christopher Jencks, *et al.*, *Inequality* (New York: Basic Books, 1972).

15. Harris, *op. cit.*, pp. 654-687.

16. Eric R. Wolf, *Peasants* (Englewood Cliffs, N.J.: Prentice-Hall, 1966), pp. 10-48.

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17. For a full discussion of this point, see Yehudi A. Cohen, "Schools and Civilizational States," in *The Social Sciences and the Comparative Study of Educational Systems*, edited by Joseph Fisher (Scranton, Pa.: International Textbook Co., 1970), pp. 55-147.

18. See, for example, Ben B. Seligam, "Automation and the Work Force," in *The Guaranteed Income*, edited by Robert Theobald (New York: Doubleday, 1966), pp. 88-90.

19. For discussion of this point, see Gideon Sjoberg, *The Pre-Industrial City* (New York: The Free Press, 1960), p. 292.

20. Georges Balandier, *Political Anthropology* (New York: Random House, 1970), p. 157.

CHAPTER V

EDUCATION AND COGNITIVE STYLE*

One of the problems which comes sharply into focus when educational discourse is "opened up" by the introduction of the concept of "non-formal education" is that of the relationship between the ways in which people are accustomed to learn and the ways in which teaching is conducted. The problem is, to be sure, one that crops up from time to time in discussion bounded by the limiting concept of formal education, but its treatment is often partial and confined, just because the teaching forms that inhere in formal education do not exhaust the potential range of ways in which teaching matter and the objects of learning may be structured.

Schooling is, after all, a limited and finite model of education. Contrary to much of the conventional wisdom of education, it begins to be fairly clear that schools are not infinitely plastic institutions that can be adapted to any and all educational tasks. This notion is less controversial than it once was, especially in the light of analyses presented by Coleman,[1] Jencks,[2] Illich,[3] Friedenberg,[4] and Dreeben,[5] which are more empirically-grounded elaborations of notions advanced speculatively a fairly long while ago by Paul Goodman[6] and others. In reference to international educational problems, Philip Coombs[7] has made a similar, and compelling case. Although there is no stable consensus in regard to just what the limitations of schooling are or why they are, it is no longer utter heresy to insist that there are quite real constraints on what sorts of things can be accomplished within the schooling mode. Schooling

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seems to be inextricably bound, at both the conceptual and practical levels, with a particular view of the character of the learning process and characterized by a commitment to a rather narrow range of pedagogical formulations. We have a strong suspicion that the school, as an institutional form, is inevitably associated with literacy. Other, less obvious variables, such as patterns of finance and sponsorship, characteristic practices of teacher selection and preparation and so on may also contribute heavily to the limitations of the schooling model. At any rate, the case for the finite educational capability of the school seems sufficiently strong to merit its adoption as at least an investigative hypothesis.

This chapter takes up, first, a brief and skeletal exposition of some of the attributes that seem to operate as "givens" in the school setting, with emphasis upon those variables that are most directly related to the general problem of "cognitive style." What is at ultimate issue is the question of how educational arrangements may be "fitted to what Ted Ward has called "pedagogical expectations," at least along the dimension of cognitive style. Following the explication of the "schooling model," a more detailed treatment of the notion of "cognitive style" will be presented and, finally, the problem will be placed within an historical setting--that is, the function of schooling in the case of the Older Order Amish and, as a comparative base, in the case of the Hutterites. These are significant cases for two reasons. First, there is a substantial body of research for both cases. Second, and more important, the cases speak to an empirically frequent *kind* of situation--that in which small and culturally comprehensive sub-groups of a nation-state, with some strong commitment to the preservation of their cultural integrity, find it necessary to work some sort of accommodation between their own culture and that of the embracing state. In these cases, as in many others, the school becomes the mechanism through which the accommodative enterprise is conducted. The treatment of this paradigmatic problem through reference to the development of cognitive style requires, since that reference is a

highly specialized one, that the problem of cognitive style be regarded not as a primary or comprehensive dimension of the problem, but only as a reasonably clear focus for inquiry. Let us begin, then, by trying to establish a context for that specialized treatment by lining out some of the important dimensions of the schooling model.

The Schooling Model

First let me point out that, in referring to the schooling model we mean to indicate a general and abstract system of attributes and not a particular institutional setting. Some things that take place in schools--recess and interscholastic athletics, for example--may not utilize the schooling model. Too, the schooling model may be appropriated in non-school settings--industrial training programs provide some examples. The relationship of the model to the institutional setting lies in the presence of the model as the characteristic and "official" mode within the institution. When the model is not utilized in schools the case is regarded as special or trivial (or *extra*-curricular). When industry does adopt the schooling model, the program is set aside as special.

The attributes listed here as the givens of schooling should be regarded as hypothetical and not necessarily exhaustive. Neither do we have a clear notion at present as to which ones are most powerful in determining the functional limitations of schooling. They are intended only as a starting point for what promises to be a lengthy and rather complex line of inquiry.

Evaluation

Evaluation has already been mentioned. The assessment of learner progress, whether undertaken over very short time increments, as in programmed learning, or over much longer increments, as in the "ungraded" elementary school; whether based on all-or-nothing criteria or partial standards of performance (linear grading) and despite variation in means of assessment and the way in which

assessments are expressed, seems to be a stable feature of the schooling model. This appears to be true at all levels of schooling. It appears to hold for all the kinds of functions to which the schooling model is applied and seems to have cross-cultural validity. (These three criteria, incidentally--stability over different levels, stability over variations in function and cross-cultural stability--form the fairly crude basis on which we identify an attribute as a given.)

Instrumentality

Schooling is seldom, if ever, an end in itself. Ratner, it has its basic reward status in view of that toward which it is an instrument. This is an attribute of substantial stability, despite a long tradition that argues for the significance of learning for its own sake (the "liberal education" tradition). Furthermore, the instrumentality of schooling is largely secondary. What is learned is of indirect, rather than direct utility. Put another way, schooling is instrumental mainly as *enabling* future behavior rather than as *being* the future behavior.

Certification

Certification constitutes the integrated and integrating commodity of the schooling model. This is so, even though certification may take variable forms and be about a wide array of attributes. The completion of a grade level is a certificate that allows passage to the next grade, just as the acquisition of a license to practice is a physician's certificate.

Time--Performance Accounting

Schooling takes either time or performance, or both, as basic dimensions of design. In some cases, time is held stable for all learners with performance allowed to vary (within some standard of minimum attainment), while in other cases performance is a constant and time is allowed to vary. (The former pattern is much more

prevalent than the latter.) It is not surprising that, when the design of school programs is undertaken, the questions of time and performance are usually among the first ones raised.

Literacy

Let me repeat the supposition offered earlier, to the effect that schools, historically and contemporaneously, make literacy a primary goal and the basis of other learnings.

Content Specificity

In the schooling model we are constantly concerned with the content to be learned. Content is, as Joseph Schwab has phrased it, a "commonplace" of schooling. We do not seem to think of schooling apart from content to be conveyed.

The Pedagogical Transaction

Schooling adopts a model of teaching and learning that, within some limits of variation, is highly stable over level, function and cultural context. The main features of that model, which is here termed the pedagogical transaction, are an initiating agent (teacher) and a receiving client (learner). Both of these parties to the transaction are role-defined and the roles are known and adhered to by both parties. The role-defined structure of relationships provides potentials and constraints that help to determine the kinds of things that may be taught and learned and the ways in which those things may be taught and learned. The pedagogical transaction has been extensively analyzed and modelled in the educational literature and I will not attempt a comprehensive analysis here. There are, however, a few points that seem to merit special attention.

Acquisition.--In general, schooling is limited to learner acquisition of content. Other factors, such as application of skills and commitment to either the "truth" or utility of what is learned,

while they may be hoped-for outcomes of the pedagogical transaction, are not designed into the transaction itself.

Determinants of Learning.--The determination of learning in the pedagogical transaction are usually assigned to qualities of the parties to the transaction, in roughly the following fashion:

1. Teacher Competence: The content-knowledge of the teacher, coupled with his pedagogical skill, is seen as one major determinant of learning. To increase the the effectiveness of schooling, increase the competence of the teacher.
2. Learner Variables: There are three major attributes of learners that are seen as determining learning: "ability," "background" and "motivation." Any or all of these attributes are seen as subject to modification in the schooling context. Learning may be enhanced through ability by selection criteria; by background through a system of prerequisites and motivation by manipulation of the structure of reward and punishment.
3. Media and Materials: The third element that is taken to determine learning is the form in which content is placed--its media, materials and other physical and conceptual attributes. The design of content is a recurrent concern in the design of school programs and is one of the features of thinking about schooling that leads to the (probably mistaken) contention that the quality of schooling can be judged on the basis of amount of expenditure.

Vertical Relationships.--The pedagogical transaction is characterized, always, by a system of vertical relationships of authority and competence. There is a master, who is superordinate to the learner, and a learner who is subordinate. The vertical relationships may be withdrawn or withheld for a period of time, as when learners move outside the domain of the teacher to operate as

co-learners or when the learner and the teacher become co-inquirers into the question of what the learner should do, but they are inevitably reasserted at some point in the transaction and almost always figure in the evaluative phase of the process.

Relationship of Content to Teacher and Learner.--In schooling, the teacher is regarded as having the content. The relationship of the content to him is of a secondary nature, with his primary concern being to convey it. For the learner, who does not have the content, the relationship between him and the content is primary, and the transmission of the content (the teacher's primary concern) is secondary. This produces a rather special kind of tension in the pedagogical transaction that is not found in some other situations, since there is no unity of *primary* relationships to create a mutuality of interest and a commonality of behavior. This feature of the pedagogical transaction may help to account for the frequency with which schools embody an adversary relationship between teacher and learner. It may also have some bearing on the fact that, with the possible exception of the level of early childhood schooling, teaching is not widely regarded as a vocationally-compelling activity. The teacher is often interested mainly in the content, but, in his teaching, his involvement with the content cannot be primary. (This should not be regarded as the only factor, since there are undoubtedly strong elements of sociological, political and economic sorts that serve to give at least some substance to the old saw that those who can't do, teach.)

Individualism.--In the pedagogical transaction the learner is almost invariably a monadic unit, rather than a member of a collectivity. His performance, not that of a group, is at issue. His future, and not that of a group, is at stake. Educative environments directed to collectivities are nearly always "unschoolish." (This statement depends, of course, on a distinction between "collectivity" and "aggregate.") In pedagogical transactions involving a single teacher

and a number of learners, the lines of relationship are almost all unilinear, running from individual learners to the teacher. Evaluation is usually competitive and nearly always individual. (This may derive, in large part, from the certification character of schooling.) The individualistic nature of the schooling model poses several quite tangible limitations on what the school can reasonably be expected to accomplish. Furthermore, when the individualistic canon is abandoned, the schooling model loses its integrity, since evaluation, certification and instrumentality center on the attributes of individuals.

The Interface Characteristic of Schooling

Finally, we come to a pervasive and perhaps highly significant feature of the schooling model. That is the fact that schooling does not seem to emerge unless some imperative exists for acculturation--for the establishment of an interface between different sets of cultural norms and practices. The cultural groupings for which schools may serve as an interface may be drawn along a wide variety of dimensions. They may be generational, with schooling providing the mechanism by means of which members of one generation make the transition to membership in the next or the transition between one culturally-defined state to the next. The grouping may be occupational, between members of an occupation and aspirants to it. Or it may be comprehensively cultural, as in the case of contact between primitive and modern societies. What is important is not whether the cultural groupings that use the school as an interface are generational, occupational, political, religious or economic but the hard fact that schooling almost always emerges when there is a demand for an interface mechanism and does not emerge in the absence of such a demand.

Cognitive Style

The terms "cognitive style," "learning style," "intellectual style" and "conceptual style" have been used fairly interchangeably within a rather substantial body of literature which takes as its common denominator the notion that we can discriminate alternative models of information processing. In a general sense, "learning style" is the most comprehensive of the terms, since it implies the integration of cognitive, affective and psychomotor processes. In this study, we are concerned only with the cognitive aspect of learning style--that is, with "stable individual preferences in mode of perceptual organization and conceptual categorization of the environment."[8] What is assumed by any theory of cognitive style (and demonstrated pretty clearly by several theories) is that the cultural background of an individual may be presumed to contribute a significant portion of the past experience which mediates and shapes cognitive style. For studies of cultural and historical sorts it is also necessary to insist that there are not only individual differences in learning style, but modal cultural differences as well.

Several models of cognitive style have been proposed. They may be divided, somewhat arbitrarily, into two categories: those that emphasize differences in abilities to perform discrete intellectual tasks and those that focus on the continuum of cognitive differentiation.

Models of cognitive differentiation--the extent to which the array of possible perceptual and conceptual objects within an environmental field or context are taken as being discrete and subject to independent manipulation--describe what appear to be a cluster of closely related continua, each one described by polar (ideal type) opposites. The work of Cohen[9] has shown that the several continua analyzed by researchers in learning style are theoretically commiserable. That is, they tend to be covariant, so that if a learner can be described in terms of his distance from one ideal type he is likely to fall a roughly equivalent distance from the analogous

ideal type on any of the other continua. Cohen has used the continuum, "analytic-relational" to describe the cluster of closely related continua of other investigators. Her composite construction of analytic-relational is of particular value here, since it is closely related to the demands of schooling, in addition to its close correlation with a variety of cultural variables. She has grouped individual and psychological correlates of analytic and relational cognitive styles in the following manner.

Criterion	Analytic	Relational
abstraction:	stimulus-centered	self-centered
sensitivity to:	parts of objects	whole objects
mode of perception:	questing	receptive
reactions to stimuli:	reflective	impulsive
reaction time:	long (scanning)	short (focusing)
related personality characteristics:	nonsocial learning	social learning
	independent	dependent
	sense of control over environment	sense of subjection to environment
	individual identity	group identity
family group:	formally organized	shared activity

Research on Cognitive Style

It may be helpful to summarize very briefly some major research on cognitive style. While it is well established in the psychological literature that people differ in their modes and in strengths and weaknesses of cognitive functioning, there is also substantial work, less well-known, that makes the same claim for cultural differences. In a longitudinal study of 320 Chinese, Jewish, Negro and Puerto Rican children in New York, Stodolsky and Lesser[10] established that a child's pattern of intellectual strengths and weaknesses is related to his ethnic background. In rank ordering spatial ability, reasoning, numerical ability and verbal ability, the researchers found great stability of rank within each of the four

ethnic groups and substantial variance between groups. Social class, rather surprisingly, affected only the level of attainment and not the ranking within an ethnic group. Environmental variables related to ethnicity were held to be the causal factors.

Garber,[11] in a study of channels of information processing among two American Indian groups (Navaho and Pueblo) and rural Spanish American children in New Mexico, found highly significant differences in the educationally relevant strengths and weaknesses of each ethnic group. The Spanish American children were more adept at using auditory channels of learning, while the Indian children were stronger at using visual channels. A study of the home environment revealed cultural factors which differentially influenced the manner in which the children of each group were socialized. Comparable findings have been reported by Gay and Cole[12] from a comparative study of intellectual functioning of Americans and the Kpelle of Liberia.

These studies do not demonstrate that one culture or ethnic group is superior to any other in intellectual skills. Support is given, however, to the notion that there are modal patterns in cognitive style that characterize any given cultural group and that these patterns derive at least partially from childhood experiences in the cultural milieu. While it is easier to identify elements of these cognitive styles than to design learning experiences to utilize their strengths, the implication for teaching strategy and educational planning is obvious.

The above studies illustrate one aspect of cognitive style: that of cultural variation in the degree to which learning style is dominated by one or another channel of learning. A second perspective is given by research into the degree of cognitive differentiation. Kagan and his associates have explored individual differences on the analytic-relational continuum, while Cohen has demonstrated social class differences on the same continuum. Too, Cohen has gathered impressive evidence to show that the relational

cognitive style is incompatible with the traditional demands of the formal school.[13]

The Witkin model of field dependence-field independence on an articulated-global continuum of cognitive style has been shown to be theoretically consistent with Cohen's analytic-relational construct and has been used in a number of empirical studies. Dawson[14] conducted studies of field dependence in adults of two tribes in Sierra Leone (Temne and Mende). The socialization of children and attitudes toward authority and tradition differs greatly between these tribes in ways found in American studies to be related to cognitive style. The more authoritarian, conforming and tradition-oriented Temne were, as hypothesized, found to be more field dependent (relational) than the Mende. Berry[15] followed this study with a comparison of the Temne and Baffin Island Eskimo. Both cultural variables and the characteristics of the physical environment suggest greater field-dependence (relationality) among the Eskimo than among the Temne. This was confirmed and further supported the hypothesis that cognitive style originates as a response to the demands of cultural and environmental factors.

The relationship between the global-articulated (relational) continuum and task effectiveness was studied in four Israeli subcultures by Amir and Sharan.[16] Kibbutz-born, non-Kibbutz, Middle Eastern and Western Israelis place differential emphasis on tradition, authoritarianism, restriction of emotional autonomy and other socialization variables. Controlling for intelligence, the hypothesis was confirmed that subjects of Western ethnic background would have higher perceptual articulation than those of Middle-Eastern origin and Kibbutz-born would have higher perceptual articulation than non-Kibbutz Israelis. There was also a positive correlation between the measures of articulation and level of achievement on the tests of task effectiveness.

This briefly presented body of research would seem to suggest a number of interesting conclusions. First, the correlation between cognitive style and a range of cultural variables suggests that

social groups can be types from one dimension to another. That is, if cognitive style is known, certain cultural traints and environmental conditions are likely to be present as well. More importantly, and more frequently, if a given cluster of environmental conditions and cultural practices and arrangements is known for a group, there is a high likelihood that the correlated cognitive style will be the modal style of that group. Thus, inferences from easily-secured environmental and cultural descriptions to cognitive style would seem to have a good probability of being valid. Now, if cognitive style is known, and if Cohen's contention that the predominant style of formal education, consistent with the schooling model presented above, is analytic, two important conclusions follow. First, schooling as a model for education "fits" best in cases where the culture induces an analytic style of cognition. Where the "natural" consequence of culture and environment is relational cognitive style, non-formal modes of education would seem to have the best chance of achieving "fit." Second, in cases where proposed changes of whatever sort (economic, political, etc.) are contemplated that call for persons having a particular cognitive style, the educational mode associated with the desired cognitive style are likely to be most successful in achieving the change. If, for example, a movement toward a more differentiated form of economic organization is desired, the success of the movement depends, partly, on the development among the participants of a differentiated (analytic) cognitive style. The greatest likelihood of achieving the necessary change in cognitive style is the educational mode (formal education) most closely associated with the needed analytic cognitive style.

Finally, the relational-analytic distinction can be applied in its conjunction with the schooling model, to an analysis of the common problem of accommodation between sub-cultures that are (1) highly variable with surrounding larger cultures, (2) internally comprehensive and heterogeneous, and (c) committed to preservation of as much of the sub-culture as possible. We turn now to one such application.

The Case of The Old Order Amish

The failure of the formal school to meet the educational needs of many non-Western cultural groups and North American sub-cultures has been widely recognized. Attempts to improve the quality of formal education in cultures outside the mainstream of Western society have been predominantly content-oriented and have offered such strategies as compensatory education, "culturally-relevant" curricula and so on.

To a lesser, but rapidly increasing extent, educators have advocated removing all or part of the educational function from the formal school and relocating it in "more appropriate" delivery systems. These innovations in content and location have, however, largely ignored the possibility that different cultures utilize unique modes of learning. It remains highly probable, however, that any culture has a characteristic or modal style of learning that may influence success both in the formal school and in non-formal programs in education.

We shall explore this probability through material drawn primarily from one North American sub-culture--the Old Order Amish. The Amish are a conservative Anabaptist sect whose members have maintained a stable material and social culture in rural areas of the Midwest and East Central United States. The Amish are characterized both by values which differ radically from those of the dominant American culture and by formal and non-formal educational institutions that derive their high degree of success from those values.

Amish values are integrated into the school both through explicit educational goals (what to teach and how to teach it) and in the mode of information processing or "cognitive style" of teacher and pupils. It is this congruence of values and style of learning that accounts in large measure for the remarkable success of Amish education.

What are the dominant values of Amish culture? Chief among these is the principle of detachment from worldly concerns. Other values implied by this separation from the outside world include the

maintenance of a disciplined church-community with strong social relationships between the members and a simple, agrarian life in harmony with the soil and with nature. These values have set the Amish apart from the American cultural mainstream. Their isolated and withdrawn world-view has given the Amish sufficiently unique material, social, linguistic, and personality characteristics that they may be considered a distinct North American culture.[17] An analogy might be considered between the Amish and an isolated non-western cultural group by-passed in their nation's push for modernization. The fact that the Amish have used both formal and non-formal education as tools to generate a comfortable material standard while maintaining cultural identity with minimum alienation, may suggest principles that could be applied in other, non-western, contexts.

Amish values find expression through a "relational" style of learning that is in distinct contrast to the "analytic" mode that typifies urban, middle-class America. There is much in Amish culture that favors a relational approach to reality: as cultural separatists, social relationships and conformity within the culture are vastly more significant than individual autonomy; as relatively non-innovative agriculturalists, relationships between the culture and the total natural environment are of importance; problems related to the environment are typically approached synthetically or wholistically rather than analytically; as a religious community, relationships between the individual, the culture, and the Deity are of great importance; and as fundamentalists in a stable and conservative social environment, there is little incentive to disaggregate reality to investigate its components.

We may contrast the Amish approach to reality with that of urban, middle class America. Whereas the former are concerned with concrete reality and with relationships between entities, the latter tend more toward the analytic mode inherent in the Western scientific tradition, a tradition that encourages the isolation of component parts of the universe.

(It should be emphasized that we are referring here only to *modes* of information processing. In the relatively hor geneous Amish culture, most individuals closely approach the mode. In the more heterogeneous cultural mainstream of the United States, even if we limit the parameters to "urban, middle class," we must expect wider and more frequent deviations from the mode. Scientists, incidentally, typically exhibit a flexible (ability to use analytic and relational styles with equal facility) cognitive mode, a fact that qualifies our statement that the Western sciertific tradition is analytic. Value judgements as to the comparative merits of analytic and relational styles of cognition are, of course, meaningless unless measured against the focal values of a given culture; in the case of the Amish, the "fit" is very congruent. It is important to note that American educational adaptations in less-developed nations generally tend strongly toward an analytic bias with no regard to whether the recipient culture typically perceives and categorizes information in analytic or in relational terms.

For many generations in the New World, the Amish were content to send their children to one-room rural public schools. Curriculum and pedagogy were entirely compatible both with Amish values and with the preferred style of learning. In the rural school, children learned reading, writing, arithmetic, and the moral teachings of the Bible. The teacher usually was a member of the community and probably not much older or with little more schooling than the oldest pupils. Learning tended to occur in groups; older pupils helped younger; recitations in unison; groups at the blackboard; the sharing of books and other materials, The image that emerges is one of learning at the concrete level with a premium placed on the memorization of useful facts and with negligible concern for analytical inquiry. Learning, too, appears to have been a social experience with minimum differentiation between individual pupils and between the teacher and pupils.

The educational value of the late 19th and early 20th century rural public school to the Amish can only be measured, as with all cross-cultural comparisons, in terms of the educational goals of Amish

culture. True education, as perceived by the Amish, is a direct preparation for eternity and the simple life of humility and resignation to the will of God. Individual excellence and autonomy is subordinated to social values and the continuity of the culture. The expression of these values through relational learning--memorization, group interaction, and personal relationships between teacher and pupils--supports the conclusion that the small rural public school was highly successful in educating Amish children.

A sharp discontinuity between the school and Amish values and learning style began to appear around 1925 with the trend toward school consolidation. The cognitive demands of North American schools have become increasingly analytic in the 20th century, largely as a result of consolidation. The trend in the large school toward instructional specialization, the stress on science and technology, the substitution of vocational teachers from outside the culture for vocational training in the home, the replacement of the Absolute with tentative knowledge, are not only a threat to Amish values but are also alien to their culturally-conditioned mode of cognition. Not only is much of the contemporary public school curriculum meaningless to the Amish, the analytic bias represents a basic conflict with the Amish style of learning.

The Amish response to school consolidation was the establishment of both Amish-controlled elementary schools and an institutionalized program of non-formal vocational, the "Amish vocational school."

The Amish, in their elementary schools, have clearly expressed the goals of formal schooling appropriate to their own culture. Curriculum is limited to the basic skills of reading, writing, arithmetic and other factual knowledge of probable utility in later life. Teachers are generally young Amish school-leavers who teach by the example of their own lives and through shared learning experiences. The school thus becomes an extension of the Amish culture and achieves a degree of success not normally attainable in situations where the local culture contributes little to the school and cannot identify

with the educational system. This is in distinct contrast to many areas in North America and in less-developed nations where the values of the urban middle class professional, rather than the experience of the children, determine the content and techniques of formal schooling.

The Amish vocational school, the upward extension of the Amish elementary school, is truly a "school without walls" in the full concept of the term. Amish youth between the ages of about 14 and 16 spend a half day a week under the direction of a teacher and four and a half days of actual participation in the economic life of the community. This modified apprenticeship, generally under the direction of their parents, removes vocational training from the artificial boundaries of the formal classroom and takes it into the life of the community where Amish youth can learn adult roles as well as vocational skills. The tasks of the Amish vocational schools are not contrived "make-work" projects for the labor is meaningful and directly contributes to individual and community welfare. Neither are the tasks an exploitation of cheap labor by parents who prefer an extra pair of strong hands on the farm to the more indirect benefits of the classroom; the parents are supportive of the classroom through their supervision of vocational learning just as the classroom is supportive of the community through intensive peer group interaction and academic work intimately linked to the vocational program. Perhaps the most profound implication of this concept of non-formal vocational education is that it has none of the simulation found in work-study programs or even in many apprenticeships; Amish youth are placed in productive and socially-needed vocational roles so that the skills learned correspond to the actual vocational opportunities available to them.

Each of these institutions, the formal elementary school and the non-formal agricultural apprenticship merits attention by educators concerned with problems of rural development, employment generation, cultural identity, and the steadily increasing percentage of GNP diverted to formal education. If we refrain from imposing

cultural value judgements on Amish education--and the greatest threat to Amish education has come from educators who have not resisted this temptation--it is evident that Amish education is remarkably successful.

In this paper, we have undoubtedly failed to account for all of the factors that contribute to the success of Amish education. Certainly the intimate linkages between the school and the recipient community, as well as the complementary (but never redundant) functions of formal and non-formal education are two of the most important factors.

A brief consideration of a quite similar culture, the Hutterites of Canada and the Northcentral United States, will support our perception of Amish education.[19] The Hutterite elementary school, although physically located on Hutterite property, exists outside the social space of the community. Teachers, although frequently sympathetic to Hutterite culture, neither represent it nor fully understand it. Teaching methodology and curriculum tend to favor an analytic cognitive mode and to reinforce the values of the American cultural mainstream. The Hutterite elementary school lacks linkages to an institutionalized program of preparation for agrarian life and thus either is terminal and relatively meaningless or is the first step on the ladder to further formal education and increased alienation. Hutterite enculturation and socialization is distinctly informal and involves relatively nondirected imitation and identification with adult roles. The Hutterite school represents a definite discontinuity with these processes while the Amish school is complementary to them. A comparison of the social and psychological characteristics of the two cultures supports the view that marginality and cultural alienation is much more of a problem to the Hutterites than to the Amish. The marked discontinuities in the education of Hutterite youth undoubtedly contribute to these problems.

The case of Amish education is only one isolated instance of formal and non-formal education in harmony with the goals of the

culture. It can, however, offer us some insight into the function and optimal location of education in other cultures.

First, it should be noted that formal education in Amish culture serves well-defined, though severely limited, functions. Skills of literacy, arithmetic, and general information of practical value are transmitted by the school at minimal cost and with an efficiency that could probably not be equaled by an alternative delivery system. The school is not an instrument of vocational training but maintains a strong linkage with non-formal vocational education.

The success of the non-formal "Amish vocational school" is a function of its direct involvement in the economic life of the community and of the training of youth in vocational skills entirely congruent with the opportunities actually available to them. In both the formal and non-formal programs we find educational goals in harmony with cultural values and the adaptation of curriculum and methodology to the expression of those values in a relational style of learning.

It is doubtful whether other cultures would want to replicate Amish education; it is equally doubtful that such a replication could succeed. The Amish case does, however, suggest some directions that might be taken in the planning of non-formal education.

First, the formal school plays a vital role in education. The success of the school in less-developed nations could be greatly enhanced by (1) increased attention to the self-perceived needs of the recipient population, by (2) adaptation of instruction to the culturally-conditioned learning style of the students, and by (3) removing some or all vocational education from the formal school and redesigning school curricula to be linked to and directly supportive of non-formal vocational education.

Second, the law that "supply creates its own demand," is a fallacy at present levels of development for most nonwestern nations. Vocational education cannot, therefore, occur in contrived situations without resultant underemployment. To avoid situations where school

leavers are too highly trained for the level of job but not trained at all for the type of job, it is essential that vocational skills be learned in actual jobs for which society has a need. For most youth this will mean training in agriculture or in crafts; however, this training is best located not in the school garden or the school shop but on the family farm, in the village repair shop, or in whatever out-of-school location is most appropriate. The role of the school will then be to supplement and complement non-formal education by transmitting the reading and mathematical skills needed in the vocational training program and to teach as much general knowledge of the larger world as the culture deems necessary.

NOTES: CHAPTER V

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CHAPTER VI

NON-FORMAL EDUCATION AND THE STRUCTURE OF CIVIC AND ECONOMIC LIFE: PAUL GOODMAN*

A theme that runs throughout these discussions is the notion that education is dependent upon the structure--economic, technological, political--within which people live. The shape of education generated by the structural base can be modified and manipulated to some extent, but there are quite severe limits on the range of possible modifications and manipulations. Educational forms cannot *transcend* structural conditions, they can only be chosen from the possibilities that inhere in structural conditions. (There have been, to be sure, numerous efforts to institute educational arrangements that transcend structural limitations, but, without exception, they fail to achieve their transcendent objectives. Perhaps the best case in point is the history of efforts undertaken as "compensatory education for cultural deprivation.") The implication of this theme is that we must always give pretty careful attention to the structural contexts in which educational efforts are to be pursued. Put another way, if non-formal educational approaches are to be successful, we need to know what sorts of educational possibilities exist, given a particular physical, economic, technological and political mileu.

This discussion focuses on the ramifications of the shape of civic and occupational life for educational arrangements by drawing upon the work of Paul Goodman. While the emphasis is upon cities and city planning in a "modern" society, the analysis of the relationships between civitas and education has wide significance for settings that are rural or "traditional." First, rural and urban components of a society are not isolated--they are at least in a symbiotic

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relationship.[1] *Second*, many of the most perplexing problems faced by the developing nations center upon the process of urbanization. Even though the proportion of urban populations in the LDCs is, in most cases, substantially lower than that in the developed nations, the cities in the LDCs are confronted with urban difficulties of at least the same magnitude and, in many cases, of similar kinds as those with which the cities of the developed nations are perplexed. Perhaps the problems of city management and planning are *more* critical in the LDCs because, given the newness and the relative proportional smallness of their urbs, they may be able to build comprehensive city planning into national development efforts to an extent and in a way that is impossible in the developed nations. While thinkers such as Goodman will, inevitably, be regarded as Utopians in America, just because our cities already exist as they are, their notions may be amenable to non-Utopian application in societies not so far advanced along the road to conurbation.

Over the history of his work, which was voluminous, Goodman treated, at one time or another, most of the thinkable dimensions of education and social organization. Even so, he returned again and again to the crucial conjunction of physical environment, occupational life and out-of-school education. As a Utopian, his vision of a humane and vital social life involves an intelligent and conservative use of physical space and resources, coupled with an economic system based on humanly satisfying work and supported by educational arrangements that make available to people, in a specific and timely way, means for learning what they need to know in order to perform their human office with "force, grace and beauty." As he worked out this vision, he relied heavily upon kinds of education that we can, without doing violence to his notions, label "non-formal." He favored education that was generated by, and conducted in conjunction with, real work. He favored distributions of education (and wealth) that held promise for maintaining the intricate symbiosis of city and countryside. He argued strongly for economic, political and educational arrangements in which all of the capabilities of all participants

could operate as educational resources--an education rooted in what people know as against the certificates they hold. He advanced an enormous number of specific proposals for education but, in the last analysis, it is not so much his specific proposals that are of greatest importance as it is the application of the way he developed of looking at the world. What follows seeks to summarize that way of looking--that "theory," in the root sense of the word--with the supposition that its utilization in approaching problems of education, formal or non-formal, and development may provide fresh insights, recognition of overlooked potentials and sensitivity to that quality of life and learning that is encapsulated by one of Goodman's favorite phrases, "human scale."

If we want to understand and appreciate human behavior we must observe dynamic human action against its "static" background. People and places are interwoven into the fabric of society. Hence, when we undertake to study a society or any of its operative parts or institutions, we are faced with the problem that we cannot isolate an institution from people or the people from the place--place being not only the immediate physical (both natural and artificial) surrounding but also the accumulation of history. As Goodman has said, we accept "the man-made background itself as the inevitable nature of things; we do not realize that somebody drew some lines on a piece of paper who might have drawn otherwise. But now as engineer and architect once drew, people have to walk and live."[2] Once we have this statement in mind it becomes easier to understand the thrust of Paul Goodman's social criticism and the purpose and direction of his so-called "Utopian" proposals.

Goodman's largest efforts have been in the planning of cities with special concern for the educational opportunities in them. This discussion will be concerned with Paul Goodman as planner, builder and educator. The intent here is to organize and clarify his concept of what education should and can be. In order to do this we must consider the context in which learning occurs. Goodman does not limit his proposals to formal education. When he does deal with the

more formal aspects of education he does not necessarily mean within the walls of a school building. Education, formal and non-formal, is an ongoing life experience. Hence, to understand and appreciate Goodman's comprehensive and Utopian educational proposals we must first gain an understanding of the physical and social context. The background upon which we perceive the foreground is the idea of education as a function of community.

Technology

A central issue in city planning is the relation between man and his technological environment. Let us begin by looking at several constructions of that relationship.

Le Corbusier's Radiant City Plan epitomizes the notion of fitting men to the technology. Le Corbusier designed a city for maximum efficiency of production in accordance with the day's most efficient technology. His concern was to advance the technical quality and to lower costs of production by maximum use of mass-production techniques, standardization and centralization. He reasoned that a community that could best do this would prosper. Therefore, people would work fewer hours per week and have higher wages and hence be better able to use their leisure time. Le Corbusier recognized the hardship and human suffering that accompanied the industrial revolution with its adverse effects on family life. Yet he believed that man's basic malady was jealousy--the jealousy of not being able to take advantage of the high technology in his domestic life.

For Le Corbusier the selection of the type of technology was completely dictated by the capitalist market place. The technology which produced the highest profit margin to the captains of industry was the technology to be employed. He felt that this would result in the products being less and less expensive and hence more readily available for purchase by the wage earners.

Furthermore, he considered grace, style and beauty to be properties of the machine. Aesthetically, man's pleasure was thought to be derived from operating machines or living in a machine house.

A strong distinction made by Le Corbusier between production and consumption is a common error according to Goodman:

> *In capitalist or state-socialist economies, efficiency is measured by profits and expansion rather than by handling the means. Mass production, analyzing the acts of labor into small steps and distributing the products far from home, destroys the sense of creating anything. Rhythm, neatness, style belong to the machine rather than to the man.*[3]

The basic problem is the dichotomy of ends and means.

In making a selection of modern technology Goodman starts with the following observation:

> *Men like to work and be useful, for work has a rhythm and springs from spontaneous feelings just like play and to be useful makes people feel right. Productive work is a kind of creation, it is an extension of human personality into nature.*[4]

But, under conditions of economic work, mass-production, high centralization and routine, there is, on Goodman's view, no sense of instinctive pleasure and men dislike their jobs.

Technology must be selected that is most humanly efficient. A humanly efficient technology is one which maximizes the opportunity for men to perform with, to use a pet phrase of Goodman's, "grace, force and beauty." These are not to be properties of machines but of man. The technology must not perpetrate the dualism of work and pleasure. Hence, it must be a technology which permits men to be in charge, to make decisions, and to direct their activities. The process of doing must have intrinsic worth.

Goodman recognizes that his definition of efficiency is unorthodox and is at variance with Le Corbusier and with Frank Lloyd Wright. But he points out that in failing to recognize the fallacy of the dualism between work and pleasure, they have neither been able to propose plans or analogies which are efficient in human terms (in the case of Wright) or efficient in purely economic terms (in the case of Le Corbusier).

Goodman does not believe that in order to achieve human efficiency that we must "turn back the clock to conditions of

handcraft in a limited society" or plan for a demographically decentralized and agrarian oriented society. For Goodman the problem is not with modern technology but with the thoughtless application of technology as a means for wrongheaded and dehumanizing ends. We must maintain a perspective of the "whole scene." We must recognize the totality of costs and the implications of use of technology and the style or organization of production.

Although Goodman is basically a decentralist he recognizes that there are some functions best served by highly centralized and automated technology. The problem is "to decide in what functions the automatic and computer style is not relevant, and there to curtail it or forget it."[5] We see that in Goodman's view technology is not a part of science but is a branch of moral philosophy.[6] The technologist must work to reduce the complexities of life in an effort to reduce the obstacles to being. This is not to argue that research on new ideas should not be carried forward but the practice of putting new technologies into operation for their own sake without adequate thought should cease. The present trend of applying technology to the production of trivialities in an effort to expand the economy, mainly for partisan political motives, is a gross hinderance to quality living.

Goodman believes that "the chief moral criterion of philosophic technology is modesty, having a sense of the whole and not obstructing more than a particular function warrants."[7] Our society has become over-technologized and must strive to simplify. We have reached a point where new improvements interfere with the quality of life. The complexities of life have become overbearing and dehumanizing. How can we use technology to help build a human community? One answer to this question was given by Le Corbusier to centralize and homogenize, i.e., to make all living places identical so that mobility does not necessitate so much dislocation. But Goodman's answer is to "guild communities where meaningful voluntary association is again possible; that is to decentralize."[8] Unlike Wright, Goodman

conceptualized decentralization as a type of social organization which requires the psychological and sociological use of geography but not geographical isolation.

Goodman believes that we must "decentralize where, how, and how much is expedient." But he does not propose a system in an attempt to achieve this maxim, rather he makes suggestions for research and experimentation which may produce answers to these empirical questions of how, where and how much? One proposal of Goodman's of particular relevance to this chapter is to decentralize the pursuit of pure science and applied technology. The research and experimentation which must occur, if we are to find solutions to our problems, has been lacking because we have centralized the scientific enterprise. Today we have big science which is financed by big corporations, big universities, big foundations and big government. We have ceased to have open-minded scientists following their own thinking and investigating that for whatever reason, they deem worthy of investigation.

Goodman contrasts this state of affairs with the state of science research during the period from the sixteenth through the eighteenth centuries. He calls this the "heroic age of modern science." During the heroic age "science was not the social orthodoxy. Indeed, a disproportionate number of the natural philosophers were exploring forbidden territory and publishing defiantly."[9] But today we have a self-contained and self-correcting system of science. Goodman points out that

> *the majority of significant advances have not come from big corporations and big universities, and have not been sponsored by foundations and government. They have come from lonely (and often rejected) individuals, random amateur inventors, partnerships, tiny firms where the scientists, technicians, and craftsmen have a chance to talk to one another.*[10]

The remedy for today's situation, according to Goodman, is not to do away with subsidizing science but to subsidize small independent scientific inquiry. He proposed that one-half the budget of the National Science Foundation and the Institutes of Health be

"directly allotted as subsistence incomes of $5,000 to any and all who demonstrate a concern for scientific tinkering and speculation."[11] This proposal is exemplary of Goodman's basic thinking that when subsidies are used that they be given with "no strings attached" directly to people and not to institutions that would make people into personnel.

Goodman perceives science as human adventure. It is in pursuit of knowledge and is autonomous. It should depend on individual genius and is directed by personal ethical choice. Scientific research must be carried on, as long as "scientists and technologists have a political responsibility for the consequences of their work; they must fight for its right use and inform and alert the public."[12]

There are two ways in which we can bring about this concept of science and the rules for scientists and technologists. One is by decentralizing the findings of research in an effort to "maximize the number of minds and interests involved," as in the above proposal. Secondly, we can accomplish two things through education. We can dispel the commonly held awe and reverence for science and the blind belief in technology as omnipotent. Secondly, we can educate technologists rather than merely train technocrats. A technologist must study and understand the physical environment, human ecology and the biosphere. He must be able to understand the whole of his activities. He should study social sciences and humanities. To accomplish this, "technology must have its proper place on the faculty as a learned profession important in modern society, along with medicine, law, the humanities, and natural philosophy, learning from the others and having something to teach them."[13] Goodman draws attention to the plasticity of technology as its "more useful property." It offers as alternatives "choices of power, raw materials, location, tooling, and a surplus for transition and retooling."[14] Its value is then that it can help us to decentralize our society where decentralization is desirable. The selection and use of technology, in an effort to build a more mixed and less interlocking society, depends on humane criteria. Goodman gives the

following criteria "for humane selection of technologies: utility, efficiency, comprehensibility, repairability, ease and flexibility of use, amenity, and modesty."[15]

Utility as a criterion refers to the standard of being able to provide for the basic subsistence of an area, i.e., food, shelter, medicine and clothing without producing other effects which may be harmful. Furthermore, utility means making people self-supportive. Because once a people are freed from drudgery, starvation and disease, but otherwise left to themselves, they can make their own decisions regarding future employment of technology. In our present condition we have certain technologies imposed upon us which lock us into more technological interference. Or a decision is made to introduce some "technological improvement" which necessitates the destruction of a neighborhood, the building of more superhighways, the centralization of administration, the establishment of county government, etc. In emerging societies technology is brought in which emulates that of the large over industrial nations. Often there is a corresponding centralization of political control in order to implement the "new" technology. Often traditions of the culture "must" be abandoned and there is a general disruption of life. The resulting kinds of cities, jobs, government and environment that the society has are often interlocked with the technical development. When the choice of a technological style disrupts a culture, necessitates further changes, or interferes with the possibility of face to face spontaneous human interaction it violates the criterion of utility.

The criterion of comprehensibility refers mainly to machines both in design and operation. If men are to be the masters of the machinery they employ they must be able to understand how it functions. To some extent this lack of comprehension is responsible for the popular mystique of the machine. Homage paid to technology, and the blind unquestioning faith in its appropriateness and the trust paid to its ability to solve our problems are partly a result of our lack of comprehension of its nature and functioning. The closely related criterion of repairability by the user combines the comprehensibility

to release man "from the bondage to a system of service men." If these two criteria are met it would reduce the anxiety which many people experience because they do not know how to judge the quality of the machines they buy. Furthermore, when we are ignorant of the machinery we tend to let the experts judge. All too often they are wrong-headed and have vested interests. We slowly lose any counter-vailing power and the situation is soon out of control.

Relevance requires an understanding of purposes of a technology. The mere fact that we can do something is not sufficient reason to do it. Goodman uses the example of medicine. Because we have advanced in this science to the point where we can keep a person alive, as a vegetable, does that mean that we should? What does it mean to "be alive?" Another example is in education. We can apply Skinner's technology of teaching.[16] Yet for what purpose? Should we condition our children simply because we have the means to do so?

The criterion of amenity requires that we weigh our judgment in the total environmental context. The technological developments in highway construction are applied with what seems to be total disregard to amenity. Often we take the best land when we should either be using the swamps or not building at all.

Modesty is important because without it we often violate all of the other criteria and we interfere with the usefulness of what we have by multiplying it. For example, the increase in production of automobiles has not resulted in the masses of people being able to travel through a city more quickly or conveniently. In mass communications we often send so many messages that they are all meaningless and become noise.[17]

These criteria serve to do away with the dichotomy of selection and use of technology. To Goodman they are indistinguishable. He is neither pro nor con on the use of technology. Rather he believes that each instance must be judged separately by those people who might be affected. The notion of separation between production and consumption of science and technology is a fallacy. The production consumption fallacy is most prevalent in the area of economics to which we will now turn.

Economics

> *The fallacy of the dualism of production-consumption emerges when an immensely productive economy overmatures and lives by creating demand instead of meeting it; when the check of the free market gives way to monopolies, subsidies, and captive consumers; when the sense of community vanishes and public goods are neglected and resources dispoiled; and there is made-work (or war) to reduce unemployment, and when the measure of economic health is not increasing well being but abstractions like the Gross National Product and the rate of growth.*[18]

If Le Corbusier's Radiant City would have come to fruition it would have been the over-ripened production society described above. Wright recognized this for he saw in it contemporary America. Yet he failed to come to grips with the problem of a society with large urban centers[19] destined to be a part of a world economy. Wright's Broadacres City offers us a decentralized local economy, but without any system of relating to the whole economy. There is lacking any provision for the masses who chose not to be agrarian. He pays little attention to localities giving mutual aid. Although Goodman respects and values the self-sufficient nature of Broadacres he perceives it as being needlessly unrelated to the entire society.

Furthermore, Goodman sees distinct human advantages to centralizing the production and distribution of certain goods. He proposes a mixed economy--one that is decentralized where possible and is centralized where it is beneficial. His concern is for a harmony between means-ends and the "elimination of the difference between production and consumption."

The main problem inherent with centralization is that it is a style that "makes for both petty conforming and admiration for bigness. The more routine and powerless people are the more they are mesmerized by extrinsic proofs of production and power."[20]

Goodman believes that if we decentralize as much as possible we can create a system of social organizations in which people deal more directly with each other. They would have to deal with fewer middle men (both economic and governmental) and would have better

contact with their environment. When people are directly in charge, initiating their own behavior and directly perceiving its consequences they have a clear understanding of themselves and of community.

Goodman's economic concern is not with how much goods cost but with how well people live. Abstractions like the Gross National Product are mainly useless in evaluating an economy. What does give a good indication of economic well being is "to notice how much the various expensive products and services of corporations and government make people subject to repairmen, fees, commuting, queues, unnecessary work, dressing just for the job, . . ."[21]

Goodman lists the following areas where excessive centralization is grossly expensive:

1. *Where staff and overhead are the chief costs (social, personal and artistic services);*
2. *Where the cost of distribution or servicing outweight the savings in centralized production. In this area there are many social and hidden costs that are not generally identified as part of this operation. Farming and processing and distribution of food fall within this category.*
3. *Where central planning and rationalization go beyond the flowing changes and contingencies of life and lead to overcommitment and inflexibility.*
4. *Where the departmentalization and standardization, which miss the uniqueness of each person, produce imbalances and positive damage that must then be expensively remedied.*[22]

Goodman argues for a regional economy. A regional economy can produce a very substantial amount of goods. Yet, these would only be a fraction of the necessary goods. Therefore, the various regions must cooperate and interact and that is what distinguishes regionalism from Wright's provincialism.

"Economy of things rather than money"--this formula is the essence of regionalism. The people of a region draw on their local resources and cooperate directly, without the "intermediary of national book-keeping with its millions of clashing motives never soluble

face-to-face."[23] Goodman proposes that people in each region work to maintain the subsistence of the region. In this way they are not interlocked with some abstract national goal nor interlocked with national politics. A region would have enough farming to feed itself, enough industry to shelter it and enough medical care. Beyond this point, every plan to expand the economy could be considered on its own merits. The criteria Goodman offers for any expansion or the continuance of any economic activity is whether the activity is worthwhile and efficient for the way of life. In some cases expansion would meet the criterion, in others it would fail. In some regions the people may decide to expand their economy and to spend more time on industrial work for economic compensation. But, in any case there would result more regional autonomy and self-subsistence and more personal choice and initiative.[24]

In the case of farming, the decentralist approach of farmer cooperatives for growing, processing, and marketing regionally is efficient. It abolishes the middle man, the food processors, and makes small farming profitable. If this were achieved Goodman feels that many more people would return to small farming. This would help decongest the cities and provide a better existence for farmers. In addition to farming most of the service enterprises could be profitably decentralized. There are many other enterprises which should be centrally organized and as automated as possible, as long as they meet the criteria presented in this chapter.

Occupations and Production

Let us turn now to an examination of Goodman's analysis of occupations and production, since, finally, involvement in significant work is regarded as the single most important issue of effective educational and social arrangements. In discussing work, Goodman wrote:

> *Bosses and managers could far more directly improve the conditions of work if, instead of indulging in paternalism, they would cut out the unnecessary authoritarianism and time controlling that in fact make people dependent and spiritless. In any big office, for example, a good part of the day is spent by a good many people doing nothing and trying to look busy. In such an office it is a big deal and a subject of gratitude if, on a hot day the boss dismisses people early! Isn't this childish? . . .*[25]

A good example of the unnecessary authoritarianism is the insistence on punctuality. Goodman contends that in most cases punctuality is required for discipline's sake and not for reasons of efficiency. The problem with discipline in this context is that it creates an unhealthy dichotomy. It does this by establishing

> *the work in an impersonal secondary environment where, once one has gotten out of bed early in the morning, the rest easily follows. Regulation of time, separation from the personal environment; these are signs that work is not a way of life; they are methods by which, for better or worse, work that cannot be energized directly by personal concern can get done, unconfused by personal concern.*[26]

In Goodman's conception there are four principles of production that must be met in order to have viable citizens for a humanistic community. They are:

1. *A closer relation of the personal and productive environments, making punctuality reasonable instead of disciplinary, and introducing phases of home and small-shop production; and vice versa, finding appropriate technical uses for personal relations that have come to be considered unproductive.*

2. *A role for all workers in all stages of the production of the product; for experienced workers a voice and hand in the design of the product and the design and operation of the machines; and for all a political voice on the basis of what they know best, their specific industry, in the national economy.*

3. *A schedule of work designed on psychological and moral as well as technical grounds, to give the most well-rounded employment to each person, in a diversified environment. Even in technology and economics, the men are ends as well as means.*

4. *Relatively small units with relative self-sufficiency, so that each community can enter into a larger whole with solidarity and independence of viewpoint.*[27]

At first glance these principles might seem to add to the costs of production but Goodman observes that when people are acting autonomously and are intrinsically committed to their work there are economies all along the way.

> *They do not watch the clock. The available skills of each person are put to use. They eschew status and in a pinch accept subsistence wages. Administration and overhead are ad hoc. The task is likely to be seen in its essence rather than abstractly.*[28]

Keeping in view the advantages of the above proposal Goodman cautions that this approach should not be universal. Here, as with his other proposals, he stresses the need for diversification and experimentation. He realizes that there are some areas of production which may not best be served by the above approach. For example, "where business is timed by the mails, where machines use a temporary source of power, being on time and on the same time as everybody else is essential to efficiency."[29] Furthermore, Goodman feels that in our economy we need not be overly concerned with efficiency. We must remember that the crucial questions raised by analyzing cost are "moral, psychological, and political."[30]

A person's job should be founded on "psychological and moral as well as technical and economic grounds. The object is to provide well-rounded employment."[31] A man is engaged in his work by his style and skill. Work "is a solid means of finding one's opportunities, things worth while, useful, and honorable to do and be justified by."[32] He must have control over the method of production and the utility of the product.

These ideas are in marked contrast to Le Corbusier's attitude that style and grace are properties of machines. Goodman's thinking is very similar to Wright's--that machines be used skillfully, honestly and gracefully by men who have these qualities. Le Corbusier, like Goodman, recognizes that men are unhappy with their jobs and that this unhappiness or anxiety permeates their basic functioning

and overall attitudes. Le Corbusier's proposed solution to this problem was twofold: to give men better housing and to automate and routinize jobs to the greatest extent possible in order to lower the number of hours a man had to work. Goodman, on the other hand, argues that we must abolish the separation between work and domestic life in general. A satisfactory productive life is integrally related to one's personal and family condition and vice versa.

A man cannot be a strong husband and father if he "does not feel justified in his work and independent in the world."[33] When a man's job does not provide "man's work" it erodes his self-respect, which, in turn, results in his disesteem with his wife and his children. Man must retain his spontaneity, free spirit, and good humor. If he is forced to relinquish these qualities in order to "make-a-living" he does so at the cost of "worthwhile life."

Goodman believes that one way to bring out a more desirable domestic life is to do away with the separation of work and home life. He wants a community plan that allows for much of production to be carried on near or at home. Domestic work which utilizes the economic and personal capabilities of members of a family should be commonplace. This is technologically and economically possible due to the availability of small power tools. Goodman points to the example of small family farming, where the productive and income producing aspect of family life is a cooperative effort. This type of relationship could easily be achieved for families engaged in industrial and craft productions, because of the large range of inexpensive labor saving devices. There would actually be less time involved in industrial production for a family than there is required of the small farmer.

For those jobs that cannot be done at home the men must be aware of the whole of production and not merely with some specialized function. The understanding, management, planning, etc., of production must be done by the workers.

Goodman's planning includes the notion of integrated industrial-agricultural productive arrangements. His approach is similar to Frank Lloyd Wright's. Goodman gives us the following as the main points of an integrated regionalism.

1. *Diversified farming as the basis of self-subsistence and, therefore, small urban centers (200,000).*
2. *A number of mutually dependent industrial centers, so that an important part of the national economy is firmly controlled. (The thought is always to have freedom secured by real power.)*
3. *These industries developed around regional resources of field, mine, and power.*

Diversified farmers can be independent, and small farms have therefore always been a basis of social stability, though not necessarily of peasant conservatism. On the other hand, for the machines now desirable, the farmer needs cash and links himself with the larger economy of the town.

The political problem of the industrial worker is the reverse, since every industry is completely dependent on the national economy, for both materials and distribution. But by regional interdependence of industries and the close integration of factory and farm work--factory workers taking over in the fields at peak seasons, farmers doing factory work in the winter; town people, especially children, living in the country; farmers domestically making small parts for the factories--the industrial region as a whole can secure for itself independent bargaining power in the national whole.[34]

It is obvious that for the proposals to work there must be a radical change in education. Basic to all of Goodman's proposals is the idea of a free and self-initiating human being, who is aware of himself as a man and his relationship to the context within which he is defined. Goodman has many proposals and plans for education. Some are short term "stop gap" measures which can be envisioned as steps toward improvement, and others are basic concepts to what education in a community should be.

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NOTES: CHAPTER VI

1. For a discussion of the symbiotic character of rural and urban environments, see Gideon Sjoberg, *The Preindustrial City* (New York: Macmillan, 1960).

2. Paul Goodman and Percival Goodman, *Communitas* (New York: Vintage Books, 1960), p. 3.

3. Goodman, *Communitas*, p. 153.

4. *Ibid.*

5. Paul Goodman, *People or Personnel and Like a Conquered Province* (New York: Vintage Books, 1968), p. 11. These two books have been published in one volume. References will be made to the specific book, not the entire volume.

6. Paul Goodman, *New Reformation: Notes of a Neolithic Conservative* (New York: Random House, 1970), p. 7.

7. *Ibid.*, p. 9.

8. Goodman, *People or Personnel*, p. 14.

9. *Ibid.*, p. 304.

10. *Ibid.*, p. 307.

11. *Ibid.*, p. 308.

12. Goodman, *New Reformation*, p. 44.

13. *Ibid.*, p. 8.

14. Paul Goodman, *Utopian Essays and Practical Proposals* (New York: Vintage Books, 1962), p. 4.

15. *Ibid.*, p. 35.

16. See B. F. Skinner, *Technology of Teaching*.

17. Goodman, *Utopian Essays and Practical Proposals*, pp. 22-48.

18. Goodman, *Like a Conquered Province*, p. 270.

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19. Although Goodman does qualify when he states "there is a limit of urban density and urban sprawl beyond which no form of social organization, centralist or decentralist can cope. Urban crowding creates a peculiar climate of both too many social relations and a kind of sensory and emotional deprivation." *People or Personnel*, p. 17.

20. *Ibid.*, p. 19.

21. *Ibid.*, p. 117.

22. *Ibid.*, pp. 120-122.

23. Goodman, *Communitas*, p. 170.

24. *Ibid.*, pp. 170-172.

25. Goodman, *People or Personnel*, p. 159.

26. Goodman, *Communitas*, pp. 154-155.

27. *Ibid.*, p. 155.

28. Goodman, *People or Personnel*, p. 113.

29. Goodman, *Communitas*, p. 154.

30. Goodman, *People or Personnel*, p. 123.

31. Goodman, *Communitas*, p. 157.

32. Paul Goodman, *Growing Up Absurd* (New York: Vintage Books, 1956), p. 142.

33. *Ibid.*, p. 122.

34. Goodman, *Communitas*, pp. 158-160.

CHAPTER VII

FORMS OF TECHNOLOGY AND LEARNING STYLE: MARSHALL McLUHAN*

Introduction

The question of how people learn what they know has always been of central importance to educational theory. The question has been addressed in many ways, under an almost infinite variety of rubrics. Different periods in the history of educational thought can be characterized by the sorts of questions about learning that were current. In recent years we have witnessed the reemergence of one question about learning that, while it has been a central question at several historical junctures, pretty much disappeared during the ascendency of scientific behaviorism, beginning during the 1920's. That is the question that has become conventionalized under the concept of "learning style."

A confluence of events, including the impact of the work of Jerome Bruner, the push for differentiated programs for the "culturally deprived," the identification of the "counter-culture" and a general dissatisfaction with conventional, behavioristic modes of teaching and measurement, forced into the purview of educational theorists the old question of whether there are different ways in which people learn and, if so, how can those different ways be analyzed and understood. The question has been studied in a number of ways by different scholars; most frequently from the perspective of either learning theory or anthropology. The question does, as well, raise serious philosophical issues that, at least in the opinion of modern positivism, were thought to have been solved. The philosophical issues are fundamentally epistemological ones: how can modes of learning be characterized and

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described and what kinds of events and circumstances, either internal or external to the learner, configure modes of learning. More specifically and fundamentally, the issues arise at the conjunction point between epistemology and aesthetic philosophy, since they bear upon perception as the irreducible genesis of cognition.

The philosophical issues that arise from the reconsideration of the question of learning style have been little examined, either by philosophers or by scholars developing the area of learning style in other disciplinary frameworks. Most of what we have had thus far is on the order of superficial and unsatisfactory rhetoric, of the sort advanced by Postman and Weingartner[1] or metaphor, in the style of Theodore Roszak.[2] While the reconstruction of epistemological questions is beginning to figure in the mainstream deliberations of academic philosophy, especially in the work of Noam Chomsky and resultant controversies, some of the most fruitful attempts at reconstruction have come from scholars of a more generalist persuasion--in the work of Teilhard de Chardin, in Paul Goodman's *Speaking and Language* and--the subject of this inquiry--in the body of work produced by Marshall McLuhan.

McLuhan has presented a general theory of enculturation and acculturation. He has tried to say how patterns of perception are formed and shaped, how perception fashions cognition and how styles of cognition determine cultural character. In an emphatically materialist vein, he chooses technology as deus ex machina and has generated a far-reaching and controversial thesis: technological media, regardless of content, are the central determinants in human perception and behavior, both corporate and private. That thesis is most succinctly (and perhaps most misleadingly) stated in the most frequently quoted McLuhanism, "the medium is the message."

If McLuhan's theory is accepted on his terms, he would have said a great deal about the variables that bear on the "learning style" characteristic of different cultures, especially that of what he calls the "television generation." In his not always humble opinion he has done just that, insisting on a special relevance of his work for

educational efforts that involve an interface between mediastically different cultures. This is particularly true when a variable of media is literacy, since McLuhan's analysis of culture often centers around the role of literacy in culture. Thus he homes in on a central and recurrent problem of schools--institutions based on literacy--and raises issues relevant to education in non-literate and what he terms "post-literate" cultures.

Four Postulates and a Theory of History

McLuhan's writings, as most of his readers will testify, are often difficult and confusing. No doubt, part of the difficulty rests with the novelty of his analysis of media and the inherent complexity of some of the themes he takes under consideration. I am convinced a larger measure of the confusion is due to his style which is disconnected and repetitious. At times he is overly expansive on a point while on other occasions he can be frustratingly abrupt. His admirers euphemistically refer to the latter as being cryptic. McLuhan's style, semantics, and organization (or lack of it) have been widely criticized. McLuhan himself, has either explicitly or implicitly admitted that his work is difficult, his ideas may be inconsistent, his method is repetitious, his facts sometimes wrong, his statements often exaggerated and his arguments not necessarily logical. Maybe I am belaboring the point or perhaps I have not yet made it. The point is, as the literary critic George Elliot has said, "It is not possible to give a rational summary of McLuhan's ideas. His writing is deliberately antilogical: circular, repetitious, unqualified, gnomic, outrageous."[3]

Acting on the obvious academic necessity to pretend that Mr. Elliot was mistaken, let us begin by summarizing what seem to be four basic ideas--ideas that, to the extent that McLuhan can be said to have a coherent theory, operate as postulates--and by stating, in broad terms, the theory of history on which he bases his work. Three of the postulates--"the medium is the message," "media, hot and cold" and

"media are extensions of man"--are, throughout McLuhan's work, used as metaphors, as aphorisms and, sometimes, as theoretical hypotheses.[4] The fourth, the concept of "sensorium," provides the necessary psychocultural entity within which the workings of the media environment on patterns of perception and cognition take place. Implicitly, for the most part and explicitly in some instances, that concept is pervasive in his work. Finally, the four postulates are employed by McLuhan as an analytic framework for historical analysis and a comprehension of his perspective must include some treatment of the historical methodology he utilizes in the application of his postulated hypotheses.[5]

The Medium is the Message

Of that vast repertory of McLuhan aphorisms, "the medium is the message" is no doubt the most familiar. This is due, in part, to the strikingly contra-conventional ring of the statement. However, I believe it is the most widely circulated McLuhanism because it is central to his general theory. It is, as well, the least understood of his postulates.

To say that "the medium is the message" is, in McLuhan's words, "merely to say that the personal and social consequences of any medium--that is, of any extension of ourselves--result from the new scale that is introduced into our affairs by each extension of ourselves or by any new technology."[6] The medium then is any technological extension of ourselves such as speech, print, clothing, money, automobile, telegraph, radio, television, etc. Hence, "medium," as a term in McLuhan's theory, means any human invention from speech to automation.

This needs to be clearly understood, since McLuhan's frequent use of words such as "communication" and "information," seems to place his comments in a limited context--that of "communications technology." But, for McLuhan, the limitations we place on "communications" in common language do not seem to apply, since, for him, *all* technology can be understood in terms of their incorporation, treatment and manipulation of information. (This is only one of several cases in

which McLuhan's special use of common words generates perplexity for the reader. Given his comprehensive use of "information," his often quoted aphorism, "the electric light is pure information," makes at least a modicum of sense. Given the more restricted use of "information" in common parlance, the statement is more or less incomprehensible.) McLuhan then proceeds, throughout his work, to pursue his personal strategy of inquiry--*the exploration of the human consequences of technology in terms of the epistemological character of cultures.*

It is possible, given the analysis above, to place McLuhan's work in a context that is more familiar than the semi-occult one in which, as media savant, he is usually placed. Although he can be, and usually is, regarded as a major hagiographer of pop culture, he may also be understood as a scholar of culture--an anthropologist or social philosopher--who studies the impact of technology on epistemology in much the same way that other scholars study the impact of technology on economic organization, on social life or on styles of art. His program of investigation shapes his selection of objects of inquiry. His concern with the epistemological leads him, as it has philosophers since Plato, to a posture of assigning primacy to the *forms* of technology, as against the *content* of it, in much the same way that philosophers concerned with the epistemology of art are attracted to "form." Hence, "the medium is the message."

We typically define as "consequences of media" those conscious or intended uses and effects of our technology. That is, we tend to believe that the content of a book or a television program is the important or influential aspect of our experience with either of these media. According to McLuhan, this approach doesn't begin to reveal their important consequences. Speaking of our machine technology in general, he says, "In terms of the ways in which the machine altered our relations to one another and to ourselves, it mattered not in the least whether it turned out cornflakes or Cadillacs."[7]

Our technology, as McLuhan points out, becomes a part of our environment and exercises a formative power over us. From their office as environment they legislate the "scale, pace or pattern" of

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human association as well as our very awareness and mode of perception. We are as blind to these environmental influences on our human condition as "fish are to water." Now, this environmental conditioning of our perception and the ensuing personal and social consequences, are the real meanings or "messages" of media. With respect to such consequences, the intended uses or "content" of media, are quite inconsequential.

McLuhan has an interesting interpretation of "content." He holds that the content of any medium is always another medium. On this account the content of the telegraph is print, the content of print is writing and the content of writing is speech. While we focus on the "content" or uses of a medium, the true nature of the medium escapes us. This is what McLuhan means when he asserts that "the content of any medium blinds us to the character of the medium."[8]

The "character of the medium" is its formative power, and for McLuhan "the formative power in the media are the media themselves."[9] As we have seen the formative power of a medium is its real "message"; therefore, "the medium is the message," a fact, says McLuhan, of which most men have been ignorant.

McLuhan's work is replete with examples. The following one deals with some of the effects of the railroad and airplane. It illustrates that the "message of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs."[10] In his chapter entitled "The Medium is the Message" he writes:

> *The railway did not introduce movement or transportation or wheel or road into human society, but it accelerated and enlarged the scale of previous human functions, creating totally new kinds of cities and new kinds of work and leisure. This happened whether the railway functioned in a tropical or a northern environment, and is quite independent of the freight or content of the railway medium. The airplane, on the other hand, by accelerating the rate of transportation, tends to dissolve the railway form of city, politics, and association, quite independently of what the airplane is used for.*[11]

Since the dawn of man, there have only been a few technologies that have had such a profound and pervasive message as to configure major portions of human history. The invention of the Gutenberg press

heralded the birth of one of these technologies--the technology of mechanization. For centuries following the Gutenberg press, the human psyche and social organism were the blind servants of mechanization. It determined our conceptions of time and space, our politics and economics, and our religion and philosophy. Even our concept of rationality did not elude its radical influence. The analysis of the Gutenberg technology--its message--is the nucleus of McLuhan's famous book *The Gutenberg Galaxy*.

The linear, repeatable medium of typography with its attendant homogeneity, eventually created in us the illusion of continuous space as container, the illusion of logic as rationality, the illusion of time as endurance, and the illusion of the universe as a Newtonian mechanism. It also created the "public," a collectivity of individuals who were separate, homogeneous and possessed of a "point of view." It fragmented and multiplied human functions in the manner of an explosion. McLuhan argues that the significance of "point of view" is not that a man may possess one (content) but rather the "point of view" mentality possessed man.

The language of "illusion" is, of course, McLuhan's, but here, too, the language is perhaps misleading, since he does not seem to mean that we possess an "illusion" that is contrary to "reality." Rather, a given culture is imbued by characteristic, technology-based illusions that differ from those of other cultures with other technologies. Although this point is not always clear in McLuhan's writing--he sometimes gives the impression of wishing to be regarded as being uniquely and quite specially in touch with a "reality" accessible only to himself and a few other privileged initiates--its acceptance can clarify some McLuhanesque perplexities. Our illusions in regard to space, time, rationality, mechanism and so on are the foundations of our epistemology and they are "illusions" only to the extent to which we fail to recognize their bases in technology and the fact that they are artifacts of a given technological world and not immutable generalizations from some "real" world of eternal verities.

It is only recently that electric technology has begun to reverse this fragmenting, explosive process. With the imploding effects of electric circuitry, we are being "retribalized." The "public" has given way to the "mass," mechanical lineality has succumbed to electric all-at-onceness. Our world has become a "global village."

Now, for the first time, we have a vantage point no other men have ever had. Our vantage point is the result of the present interfacing of two great technological ages, and it is enhanced by the speed of electricly induced change. It is this shift from mechanization to electric technology and the rapid succession of media and their effects that has sharpened our perception. With new insight we announce "the medium is the message."

Media Hot and Cold

To fully appreciate McLuhan's media analysis, we must understand his reference to media as either "hot" or "cool." By characterizing media in this fashion, McLuhan is distinguishing between what he sees as two fundamental types of media. He employs three criteria in making the distinction between "hot" media and "cool" media. First, he considers the sense or senses that are engaged by the medium, second, the amount of participation that is evoked by the medium, and third, the kinds of effects (message) engendered by the medium. These three aspects of a medium are closely, if not inextricably, interrelated in such a way as to color the nature of the medium, making the "hot" and "cool" distinction possible.

In the following passage McLuhan defines "hot" and "cool" media and indicates how the three above mentioned criteria are interrelated.

> *There is a basic principle that distinguishes a hot medium like radio from a cool one like the telephone, or a hot medium like the movie from a cool one like TV. A hot medium is one that extends one single sense in "high definition." High definition is the state of being well filled with data. A photograph is, visually, "high definition." A cartoon is "low definition," simply because very little*

> *visual information is provided. Telephone is a cool medium, or one of low definition, because the ear is given a meager amount of information. And speech is a cool medium of low definition, because so little is given and so much has to be filled in by the listener. On the other hand, hot media do not leave so much to be filled in or completed by the audience. Hot media are, therefore, low in participation, and cool media are high in participation or completion by the audience. Naturally, therefore, a hot medium like radio has very different effects on the user from a cool medium like the telephone.*[12]

The effects of a "hot" medium are directly related to the medium's extension of a single sense in "high definition" and its incapacity to evoke participation. "Hot" media lead to specialization and fragmentation in our lives just as they are a specialization and thereby a fragmentation of our senses. The fragmentation effect of hot media has resulted in the rise of individuality and the individual "point of view." McLuhan refers to this rise of individuality and fragmentation as "detribalization." Since hot media do not permit participation or involvement, they encourage and produce detachment. They enable the individual to break away from the organic wholeness of the group and develop an independent "point of view." The posture of viewing society and the world in an uninvolved, objective, independent manner has become a respectable model for civilized men as they have been conditioned by the bombardment of hot media. The great esteem given the stereotyped profile of the pure scientist in our society indicates the value we place on such a posture.

Primitive or "tribal" man, on the other hand, is not as fragmented as civilized man. Here, the individual is an organic and integral part of that whole which is the group. He is totally involved in the group life. There are no "private points of view." Specialization of the senses in perception has not occurred to the degree it has for societies shaped by mechanical technologies. Consequently, in the tribe we do not find the fragmentation and specialization of life that manifests itself in what we call "jobs." Rather, in tribal cultures, we find "roles" which are more inclusive and integrated approaches to life.

Just as primitive man is in contrast to civilized man in these respects, so "cool" media are in contrast to "hot" media in terms of their effects. "Cool" media interrelate our senses and provide a balanced perception. They create involvement in depth as they seduce our participation. The effects of cool media are antithetical to separateness, fragmentation, and individuality. They have the inclusive character of an icon. They are mythical and lead to corporateness.

"In terms of the theme of media hot and cold, backward countries are cool, and we are hot."[13] As hot media "detribalize," cool media have the power to "retribalize."

Enormous disruptions in society occur when a medium of a different "temperature" is introduced into a culture. That is, a hot mechanical medium results in social turmoil when introduced into a "cool" tribal culture. Likewise, television, a cool medium, has been causing a tremendous upheaval since its introduction in our hot society. The "generation gap" is actually the difference between a new generation raised with the influence of television and electric technology and the older generation whose perceptions, goals, beliefs and attitudes have been created by the effects of print and mechanical technology. The electric media cultivate involvement, a concern for the present, a "nowness." They bestow a mythical dimension on experience and cause a need for integration. McLuhan thinks it only natural, that children raised with the dominant influence of electric media, should eschew "jobs" and distant goals which belong to the past mechanical age of fragmentation and lineality. The new "now" generation are in search of roles and are concerned with the immediate.

At this point, McLuhan's theory of history, which will be discussed in detail further on, begins to emerge. History, at least the history of the West, can be understood as a series of transformations of culture that flow from changes in the epistemological forms that inhere in technology. These changes, in turn, are manifested in political, social and economic transformations, often ones of great

magnitude. It was the application of theory, in *Galaxy*, to the Reformation epoch, that established McLuhan as a major thinker, and he has maintained it through his later work, even when he has turned from history to "futurism." It is especially interesting, in light of the position taken here that McLuhan's main concerns are aesthetic, to note that historiography, on his view, becomes an emphatically aesthetic enterprise; i.e., the identification of the epistemological forms of technological transformations, at least at those points when the "temperature" of media is radically altered. Indeed, McLuhan is insistent that at such times it is uniquely the "extra-environmental artist"--especially the "avant garde," such as Joyce, Picasso and Eisenstein--who is best equipped to understand and interpret the foundations of social, political and economic changes.

Media as Extensions of Man

The concepts of medium as message and hot and cool media subsume McLuhan's treatment of one term of the transaction between medium and person. It is here that McLuhan attempts a turn calculated to counter the unrestricted relativism and nascent mysticism of his concept of medium by introducing a biologically based construction of the person. Technology, it turns out, does not flow from an infinitely variable world of unrestrained imagination. Rather, it is shaped by and grounded in the biological character of man. Media are extensions of man. Too, our response to media--our bundle of "illusions"--constitutes a sort of quasi-biological entity--the "sensorium"--which mediates our "takings" from the total possible world of perception.

All media are extensions of man. That is, any medium extends one or more of our human organs or functions in some material other than ourselves. Two of the clearest examples McLuhan offers in support of this assertion are clothing and the wheel. Clothing is an extension of skin which functions to conserve body heat and energy. The wheel extends the function of transportation, which is a function of the foot.

If this were all McLuhan wished to convey regarding media as extensions of man, my task would be easily concluded. However, he attempts to explain the causative principle behind all extensions of ourselves and their effects upon our sensory lives, as well as the reason we are "somnambulists" when it comes to our perception of the nature of media. Addressing himself to these matters he writes:

> *In the physical stress of superstimulation of various kinds, the central nervous system acts to protect itself by a strategy of amputation or isolation of the offending organ, sense, or function. Thus, the stimulus to new invention is the stress of acceleration of pace and increase of load. For example, in the case of the wheel as an extension of the foot, the pressure of new burdens resulting from the acceleration of exchange by written and monetary media was the immediate occasion of the extension or "amputation" of this function from our bodies. The wheel as a counter-irritant to increased burdens, in turn, brings about a new intensity of action by its amplification of a separate or isolated function (the feet in rotation). Such amplification is bearable by the nervous system only through numbness or blocking of perception . . . . Self-amputation forbids self-recognition.*[14]

In other words, all media are extensions of those parts of ourselves which have been overstimulated to the point of threatening the coordination function of our central nervous system. The strategy of placing the organ outside ourselves is a quest for equilibrium. The "amputation" relieves the strain on the central nervous system, by causing a numbness with respect to the threatening organ (sense or function) that is extended. However, the extended organ is thereby accelerated and intensified, becoming a specialist irritation. The central nervous system responds with a generalized numbness. This numbness blocks recognition of the effects of the accelerated function of the extended organ. When the acceleration places a burden upon, or overstimulates, another organ, sense or function, a new "autoamputation" or extension is necessary.

Throughout this process there is a shifting of sense ratios. The equilibrium that is sought by the process of extension, is an equilibrium among the senses, for the central nervous system is the coordinator of the senses. As extension amputates an overstimulated

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organ, a new sense ratio or "closure" is established. The extended and thereby accelerated organ has its own sensory bias which has been intensified by the extension. As a new component of our technological environment, it takes part in the latest transfiguration of our sensory lives.

Thus, it is the interaction of our senses with our technologies, and the new scale, pace or pattern they introduce into our lives, that give birth to new technological extensions of ourselves. This interaction and its result prompted McLuhan to say that "Physiologically, man in the normal use of technology (or his variously extended body) is perpetually modified by it and in turn finds ever new ways of modifying his technology. Man becomes, as it were, the sex organs of the machine world . . . ."[15]

The significant reversal from the rapid multiplication of mechanically accelerated and extended human organs, to the present implosion, came with electric technology. In one of the very few passages in which his attitude toward this phenomenon seems to be apprehensive, rather than enthusiastic, McLuhan considers the new technology in terms of his musings about technological origins in general. He writes:

> *With the arrival of electric technology, man extended, or set outside himself, a live model of the central nervous system itself. To the degree that this is so, it is a development that suggests a desperate and suicidal auto-amputation, as if the central nervous system could no longer depend on the physical organs to be protective buffers against the slings and arrows of outrageous mechanism. It could well be that the successive mechanizations of the various physical organs since the invention of printing have made too violent and superstimulated a social experience for the central nervous system to endure.*[16]

McLuhan believes there is only one extension of man to come, and that seems to be somewhat destined to occur. As he put it in his introduction to *Understanding Media:*

> *After three thousand years of explosion, by means of fragmentary and mechanical technologies, the Western world is imploding. During the mechanical ages we had extended our bodies in space. Today, after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. Rapidly, we approach the final phase of the extensions of man--the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society, much as we have already extended our senses and our nerves by the various media.*[17]

This final extension of ourselves will be accomplished, according to McLuhan, via the computer. The interplay between man and his technology, broken in all previous stages by the intervention of the human nervous system as a mediating agent, becomes, with electronic technology, a closed system--a "feedback loop" in computer parlance.

The Concept of Sensorium

McLuhan's concept of sensorium, its variegations and determinative power over perception, is the foundation of his system. This foundational concept is what authenticates McLuhan's theory as an aesthetic theory, however, given its import for the total system, it could not be excluded from consideration in any sufficient overview of McLuhan's theory.

The sensorium is composed of the five senses. The ratio between the senses varies in this composition whenever a particular sense is intensified. Synesthesia, the interplay or mutual involvement of all the senses, is achieved when there is a balanced ratio among the senses. In this respect, the sense of touch has a special place in the human sensorium. McLuhan asserts that "tactility is the interplay of the senses, rather than the isolated contact of skin and object."[18] Tactility then, is itself synesthetic. This, in part, accounts for the fact that tactility is the first casualty among our sensory modes of perception when the visual sense is extended. As we saw earlier, the extension of any sense demands a new closure or ratio

among the senses. Furthermore, the specialized intensification of a single sense disrupts the sensorium, and by fragmentation, thwarts synesthesia.

The technologically extended sense is removed from the human sensorium. Interaction with the other senses is thereby prevented. In his "Prologue" to *The Gutenberg Galaxy*, McLuhan discusses this point.

> *. . . The principle of exchange and translation, or metaphor, is in our rational power to translate all of our senses into one another. This we do every instant of our lives. But the price we pay for special technological tools, whether the wheel or the alphabet or radio, is that these massive extensions of sense constitute closed systems. Our private senses are not closed systems but are endlessly translated into each other in that experience which we call consciousness. Our extended senses, tools, technologies, through the ages, have been closed systems incapable of interplay or collective awareness.*[19]

Although an extended sense is objectified and thus abstracted from the sensorium, it nonetheless effects the sensorium. The new closed system requires sensory closure. Simply stated, the intensification of a sense manifest in any media demands a new ratio among the senses. The reproportionment of the sensorium is thus effected.

In the earlier examination of the phrase "the medium is the message," it was mentioned that a few technologies have been so profoundly influential in human affairs as to pattern major segments of history. The omniverous effects of such technologies are rooted in the particular disposition of the human sensorium in the prevailing technological age. Note the following passage from *The Gutenberg Galaxy*:

> *. . . manuscript culture is intensely audile-tactile compared to print culture; and that means that detached habits of observation are quite uncongenial to manuscript cultures, whether ancient Egyptian, Greek, or Chinese or medieval. In place of cool visual detachment the manuscript world puts empathy and participation of all the senses. But non-literate cultures experience such an overwhelming tyranny of the ear over the eye that any balanced interplay among the senses is unknown at the auditory extreme, just as balanced interplay of the senses became extremely difficult after print stepped up the visual component in Western experience to extreme intensity.*[20]

In other words, tribal man, presumably through the technology of speech, exaggerated the audile sense. This unbalanced the sensorium which colored his perception and therefore his world. Medieval man's strong oral traditions were balanced by the introduction of writing; the extension of vision. In his discussion of "light through" vs. "light on," McLuhan says "manuscript culture had no fear of tactility."[21] This interplay of the senses means that the medieval man had achieved a balanced sensorium. But his synesthetic experience was fractured when print technology intensified the visual sense. Modern man's distorted sensorium is the necessary result of centuries of visual dominance born of the Gutenberg technology.

The new electric age is relentlessly restructuring the human sensorium, most notably, through the synesthetic quality of the television image. The present electronic revolution is a revolution in perception which portends a radically new personal and corporate future.

The Theory of History Employed by McLuhan

McLuhan employs a dialectical rather than linear theory of history. This is most immediately revealed in his analysis of content. His statement that "the content of any medium is always another medium"[22] is emphatically dialectical in essence. In this context, let us attend for a moment to the development of specific media.

As thesis, we may consider the homeostasis of human functions. Our antithesis then is clearly the environmental overburdening of one of these functions. In a struggle for equilibrium or relief from irritation, we externalize the function in some material other than ourselves. This technological synthesis provides the relief from irritation which McLuhan refers to as "narcosis." However, the relief is short lived, for this technological extension of ourselves is an acceleration of the function so extended, in an environmental form. As environment, it creates new burdens and thus becomes its own antithesis requiring a new synthesis. This being the case, the content

of a medium, is a medium that had been overtaxed by accelerated environmental stresses and was therefore itself accelerated and intensified to meet the environmental challenge via the current medium.

Now if we widen our scope to ponder in this same light, the history of major technological ages, we will again recognize a dialectical movement that is almost compelling in its neatness.

To begin at the beginning, we may take as thesis the "state of collective awareness (that) may have been the preverbal condition of men."[23] As thought processes become more complex and less readily contained, there develops an impetus toward utterance ("outerance"). The spoken word as a technological extension represents the birth of that long period of preliterate yet verbal man. His extreme audiality is antithetical to the balanced sensorium of his preverbal ancestor. As writing is invented and spreads, a temporary synthesis is achieved in medieval culture. Enter, the printing press; the new antithesis--accelerator of the visual sense, greatest of all fragmenters, archetype for all mechanical extensions of bodily organs and functions. The following centuries of mechanical fission witness the age of increased outering of human senses, which in turn, places increased burden upon the integrating function of the central nervous system, and is therefore antithetical to it. The temporary synthesis of the electric technology is the extension of the central nervous system itself. The electric age evolves into a new antithesis as it cries out for the final synthesis--the technological extension of consciousness. The millenium is reached. A ". . . by-pass (of) languages in favor of a general cosmic consciousness . . . the condition of speechlessness that could confer a perpetuity of collective harmony and peace."[24]

The dialectical character of McLuhan's theory should be quite clear, even though it is not unusual to find commentators who seem to think that McLunan is a cyclic theorist and that the "global village" is a metaphor for some sort of return to primitivism. That is simply

not the case, since the content of electronic media is print, while the content of verbal media in primitive culture is thought.

It is important to note again that the foundations of historical study are, for McLuhan, material conditions--that is the technological condition of a given culture. If we take care to notice this, the historical analysis given by McLuhan can be seen as falling, insofar as objects of inquiry are concerned, within the same domain as cultural historians such as Julian Steward, Bernard Wittfogel and Leslie White (as well as his former associate, George Innes). His emphasis, however, is more squarely upon the epistemological consequences of material conditions than it is upon the economic and political consequences. There is, thus, a somewhat curious similarity between McLuhan's history and that produced by Marxists working in the tradition of Marx's early work. (The most familiar example to American scholars is Herbert Marcuse.) There are interesting and striking parallels with certain sections of Marx's preliminary study for *Das Capital,* published under the title of *Grundrisse*[25] and with some of Marcuse's work, especially *An Essay on Liberation.*[26]

The doctrines of medium as message, of cultural transformation through the interplay of hot and cool media and the concept of the sensorium, all flow from an historical vision that is both dialectical and materialist. It is fairly important to keep this well in mind when addressing McLuhan's theoretical hypotheses, since to ignore it is to run the risk of isolating McLuhan from his intellectual underpinnings, converting him from a scholar to a mystic. As a kind of dialectical materialist, though not a Marxist one, McLuhan can be seen as having approached the problem of extrapolating future cultural configurations from present material conditions, utilizing an aesthetic methodology to analyze the character of media which, for McLuhan, constitute the most relevant material conditional variables.

Non-Formal Education

If we accept McLuhan's general outline of the nature of technological form and its relationship to learning (or some modification of it, consistent with whatever empirical evidence can be amassed for McLuhanesque hypotheses) we may identify a fairly powerful instrument for formulating educational plans and proposals. That instrument, in turn, has two important parts. First, economy of learning (and, perhaps, of distribution) should be greatest where there is a high degree of congruence between whatever medium is selected for educational purposes and the archetypal form of technological environment in which the subjects live. In relatively undifferentiated, highly interconnected and low mechanical technological systems, educational media of low definition, multi-sensory design and embodying either a low mechanization or a "hidden" mechanization (as in television) should result in a higher level of learning efficiency. This does not mean that there is a *single* best or most efficient educational medium, but only that we should be able to discriminate between those with a good probability of efficiency and those with a low probability of efficiency. In the example above, a traveling story-teller or puppet show meets the criterion of "fit" with technological form as well as electronic media do and, in certain geographic and economic conditions, probably better. The application of this analysis can, perhaps, be developed, in a more sophisticated range of applications than the simple reading given in the example. It may, for instance, be possible to test the correlations between easily observed technological practices and postulated technological forms, so that indices of technological form may be established. Transportation patterns are rather easy to schematize and, if those patterns could be correlated with other technological variables, one might be able to make statements such as "in societies with (x) pattern of transportation, there is a high likelihood that literate forms of learning will be efficient." These are not, to be sure, causal relationships. They are merely functional. Still, if

they can be made with some certainty, the process of educational planning might be more precise and fruitful than it now is.

Second, if we wish to pursue a development program that incorporates a describable technological model we might enhance the probability of success by employing information and educational media that, in their formal properties, are consistent with the technological base we hope, ultimately, to attain. For example, many development schemes aim at the construction of a technological base that is, in McLuhan's terms, mechanical and linear--conventional modes of industrial production, and so on. Now, on McLuhan's view, that sort of technology is associated with "visual," "linear" and literate modes of learning. (There is some evidence to support that view from other kinds of research.) In such a case, literacy should not be ignored or played down, even though, in terms of efficiency of distribution and so on it may look like a pretty bleak enterprise, especially when contrasted with such media as television and radio. It should not be ignored because, if the development scheme succeeds, literacy, on McLuhan's interpretation, *must* emerge and, perhaps, deliberate efforts to foster it may speed the development process along. At least, if literacy is adopted as a medium of learning there is no built-in contradiction between the selected educational medium and the form of the technology toward which development aims.

In the case of McLuhan, as in so many other instances, what is most centrally at issue is the inclusion, within our educational and planning deliberations, of points of view and perspectives that, while they may appear at first glance to be arcane and "theoretical" seem, on closer inspection, to have some promise for broadening our conceptualization of problems and of approaches to problems. It is very likely that many of our failures in past attempts to plan and control development are rooted in conceptual inadequacies and limitations. The best antidote to that is, in almost every case, the serious consideration of any conceptualization that has some potential to improve and expand the intellectual foundation upon which we build our practical efforts.

NOTES: CHAPTER VII

1. Neil Postman and Charles Weingartner, *Teaching as a Subversive Activity* (New York: Delacorte Press, 1969).

2. Theodore Roszak, *The Making of a Counterculture* (New York: Random House, 1968).

3. "The Message of Marshall McLuhan," *Newsweek*, March, 1967, p. 53.

4. The primary reference for what are here regarded as the three central hypotheses is *Understanding Media: The Extensions of Man* (New York: New American Library, 1964).

5. Although McLuhan has avoided discussion of his historiographical method in standard terms (he uses, he says, a method of "probing") his major work, *The Gutenberg Galaxy: The Making of Typographic Man* (New York: New American Library, 1962) is an historical study and exemplifies an historiography that can be rendered in conventional terms.

6. *Understanding Media*, p. 23.

7. *Ibid.*

8. *Ibid.*, p. 24.

9. *Ibid.*, p. 35

10. *Ibid.*, p. 24.

11. *Ibid.*

12. *Ibid.*, p. 36.

13. *Ibid.*, p. 40

14. *Ibid.*, p. 52.

15. *Ibid.*, pp. 55-56.

16. *Ibid.*, p. 53.

17. *Ibid.*, p. 19.

18. *Ibid.*, p. 273.

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19. *Gutenberg Galaxy*, pp. 13-14.

20. *Ibid.*, p. 39.

21. *Ibid.*, p. 131.

22. *Understanding Media*, p. 23.

23. *Ibid.*, p. 83.

24. *Ibid.*, p. 84.

25. Karl Marx, *The Grundrisse*, edited and translated by David McLellan (New York: Harper and Row, 1971).

26. Herbert Marcuse, *An Essay on Liberation* (Boston: Beacon Press, 1969).

CHAPTER VIII

A COMPREHENSIVE VIEW OF NON-FORMAL EDUCATION: THE DESCHOOLING VISION OF IVAN ILLICH*

The idea of non-formal education has a number of identifiable sources and the interest in non-formal education is a bundle of sometimes disparate threads. One of those threads is the emerging ideology of "deschooling," a posture most often associated with, but not limited to, the work of Ivan Illich. Simply stated, the deschooling vision begins with the assumption that education has become trivialized and, for many human purposes, dysfunctional, through a mindless identification of education with schooling and through an unexamined program of expanding schooling in response to all expressed educational needs. From this assumption, Illich and others move to the delineation of a strategy--deschooling--which seeks to return educational activities to their functional roots, to provide educational means that are grounded in human needs. This, of course, is a program to which a great many people might agree, even though there is, and is almost sure to continue to be, controversy about how best to implement such a program. In this discussion we will examine the approach that Illich himself has advanced. That approach has substantial interest, despite its Utopian overtones, since it is one of the few explications of an educational ideology that is, at once, based on a "non-formal" sort of conception and couched in truly comprehensive terms. Though it may not be possible to say whether deschooling requires a comprehensive scheme or may be worked out piecemeal, the comprehensive argument deserves a hearing and, perhaps, a place in our deliberations.

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*By Lucille C. Bruch

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William Blake claimed that the prevailing perception of reality during his lifetime was essentially an illusion, a distorted image produced through the idolatry of science. This illusion Blake called single vision, and the commitment to single vision led man to accept the premise that science can quantify all that man can ever know. Blake believed this not only to be a very impoverished theory of the nature of man but also a theory that would eventually lead from crisis to destruction. What Blake so articulately argued for was the apprehension of the world from the belief in a multiple vision, a vision that encompassed not only Newtonian science but also the imagination, the creative force, of man himself. The emphasis of a multiple vision is on the individual and not the technology.

Ivan Illich argues also for a multiple vision, a conception of reality that does not demand technological answers to what are fundamentally ethical questions. Illich is certainly not anti-rational, but he is concerned with the current cult of product-worshippers. In his study of the problem of man and his relationship to his social institutions, Illich has examined many claims of our culture. One of these is the theory that the progress of technology is unending and concomitant with and dependent upon this progress is the spiritual and material well-being of all the world's peoples. This, Illich believes, to be the central illusion of our time.

The illusion that growth and technological sophistication will automatically benefit all people is just that, an illusion. It is a myth, Illich states, that is not only created but perpetuated by technology itself. The myth of unending consumption is ". . . grounded in the belief that process inevitably produces something of value and, therefore, production necessarily produces demand."[1] This myth continues to exist primarily because of the exposure it gets through the school systems of the world, especially the school systems in the United States. School is defined by Illich as ". . . the age-specific, teacher-related process requiring full-time attendance at an obligatory curriculum."[2]

Illich quotes Marx as saying that man must go beyond his illusions in order to change the conditions which make these illusions necessary.[3] We must be capable of extension beyond a class society in order to alter the conditions which make such a society necessary. Concomitant with the myth of unending consumption, Illich explores several other distortions dominant in current culture: the confusion of process and substance, teaching and learning, grade advancement and education, a diploma and competence, fluency and the ability to say something new, service and value, and education and schooling.[4]

Paul Goodman said that science and technology eventually become the system of mass faith. Herbert Marcuse posits the same theory when he states, ". . . technical progress, extended to a whole system of domination and coordination, creates forms of life (and of power) which appear to reconcile the forces opposing the system and to defeat or refute all protest in the name of the historical prospects of freedom from toil and domination."[5] Illich reiterates this view when he claims that "social reality itself has become schooled."[6]

Our basic human needs are now translated by our society into demands for more and more scientifically produced commodities. The technological extensions that McLuhan mentioned have indeed become the initiators. Even poverty is currently definable by set standards which the technician can change at will. Theodore Rosak expresses it thusly: "We must come to see that enforced, wholesale, and rapid urbanization has been an irrational obsession of the industrial ethos. . . . We have defined the city as progress, rural and village ways as backward, and we have shaped our economy to suit this distorted conception of historical necessity."[7]

These industry-technology-based definitions and classifications are seen by Illich as being primarily transmitted via contemporary schools. The schools are described as culture transmitting ritualistic institutions which Illich analyzes in comparison to previous religious cultures. Religion may once have formulated a world view, according to Illich, but he sees religion now as either irrelevant or to a great

extent as independent from the churches. Education must also gain such independence from the schools. Similar to the traditional church before the Reformation, certain policies of the school may be questioned by the people but not by the institution itself. During the 18th century, men wondered if it were necessary for all men to be clerics in order to be qualified to govern their constituents; by the 19th century the answer of the pooulus was negative. Illich believes that religious freedom was granted in return for obligatory schooling. Religion became optional when schooling became obligatory. As the unchurched ceased to be regarded as the rebels of society, discrimination increased against the unschooled in the United States, particularly.

Three functions of today's schools which Illich views as once being common to th powerful churches include being ". . . simultaneously the repository of society's myth, the institutionalization of that myth's contradictions, and the locus of the ritual which reproduces and veils the disparities between myth and reality."[8] Both church and school provide a ritual in which each citizen participates and in which each can see himself belonging and witnessing to others where he belongs. Just as the church was to save you from hell, the school is to save you from the ghetto, and both are substitute mothers. "Equal educational opportunity is, indeed, both a desirable and a feasible goal, but to equate this with obligatory schooling is to confuse salvation with the Church. School has become the world religion of a modernized proletariat, and makes futile promises of salvation to the poor of the technological age."[9]

One of the central and most dangerous distortions engendered and communicated by the school is a perspective of the world in which everything, including man himself, can be quantified. Personal growth, for example, is not a measurable entity. It is this particular property of the school, the disparity between myth and reality, that Illich views as one of the most difficult yet necessary challenges. "Neither ideological criticism nor social action can bring about a new

society. Only disenchantment with and detachment from the central social ritual and reform of that ritual can bring about radical change."[10]

Illich agrees with Philippe Aries in his belief that childhood is the invention of the industrial age who needed to rationalize the necessity of schooling for the young. In greatly over-simplified terms, schooling thus became equated with education and took the place of an apprenticeship. Schools became a process whereby a person could achieve full recognition into society only after a lengthy period of required treatment. The commodity which schools produced that enabled a person to be initiated into society was education. Without a long period of schooling, there could be no education, and therefore, no full admittance into society. It is this myth that Illich attacks.

Since Illich does claim to be addressing himself to the problems existent in the structure of society, rather than simply the substance of it, his strategy for reform involves the disestablishment of the organization known as "school" rather than a change in its content or curriculum. "I believe that the disestablishment of schools has become inevitable and that this end of an illusion should fill us with hope."[11] This imperative is based on man's need at this particular moment in history to develop an entirely new perspective about himself and the world around him, a multiple vision. This perspective would enable man to see manipulative technologies for what they actually are--reshapers of human life and human values in order to serve the purposes of these same technologies. While Illich does cite the school as a paradigm case of a complex, inhuman, and manipulative institution, he is in actuality calling for the restructuring of our entire social order.

If a person is to develop and grow intellectually and emotionally, he needs ". . . access to things, to places and to processes, to events and to records. He needs to see, to touch, and to tinker with, to grasp whatever there is in a meaningful setting. This access is now largely denied."[12] The restrictions present in schools today, such as what a child may study and when he may study it, Illich views

as schooling *for* life rather than as opportunities for an education *in* everyday life. "Access to reality constitutes a fundamental alternative in education to a system that only purports to teach about it."[13]

The functions of contemporary schools are ranked by Illich in order of their importance to today's society: first, custodial care; second, the selection and certification for social roles and status within the community; thirdly, indoctrination to social values; and lastly, learning.[14] These functions are consequences of the structure of the school, itself, and this structure is represented by what Illich refers to as "the hidden curriculum," that is a framework which cannot be altered and within which all changes in the curriculum are accomplished. This structure ". . . conveys indelibly the message that only through schooling can an individual prepare himself for adulthood in society, that what is not taught in school is of little value, and that what is learned outside of school is not worth knowing."[15] It is the hidden curriculum which changes learning from an activity into a commodity, from a verb into a noun, into a situation in which man becomes the consumer of the product, learning.

The process of schooling according to Illich compels children to attend on the supposition that children can also be compelled to learn; it segregates children away from real life conditions; schooling is based on the supposition that learning consists of being taught by a teacher; and it identifies education with the number of years of schooling or the degrees obtained. Schooling further inculcates in the child the insidious condition of "rising expectations" which in turn creates in him the needs that enable the inhuman and manipulative technologies to continue to expand. Finally, schooling prepares the child to compete for bigger and better products and thusly condemns him to ever greater consumption. The cycle is complete, and the technology which man created now controls him. Instead of fulfilling an authentic need, the manipulative technologies distort and control man's life while creating in him the desire for more consumption and greater technologies.

How then can schools be disestablished, or to use Illich's own terminology, how can the deschooling of society be accomplished? Can the schools be improved? Can more education be offered outside of the school? What are the conditions of the educational system that do not hinge on the school? Can contemporary man provide an education for his children without recourse to the school or its equivalent? These are the questions to which Illich has addressed himself in an effort to posit some alternatives to a schooled society.

The answer to the first question is an emphatic no, and it is this claim that separates Illich from the majority of modern educational critics, many of whom share his belief in the dehumanization of modern institutions. Erich Fromm, for example, views human nature as capable of only a limited number of potential structures which give rise to three possible alternative solutions to the crisis of current alienated technology. Fromm defines these alternatives as: first, we can continue in the direction we are going, which will lead to pathology or thermonuclear war; second, we can change our society through force and revolution, which will lead to the breakdown of the total system from which violence and a brutal dictatorship would evolve; third, we can strive for the humanization of the system we now have, gaining control of the economic and social organizations and processes, so that man can live an autonomous life.[16] While Illich is sympathetic to the goal of an autonomous life, his claim is that the current system must be disestablished before a humanized society can evolve.

In answer to the second question, whether more education could be offered outside of the school, Illich would say yes, since he contends that almost all education does take place spontaneously outside the confines of the classroom anyway. To answer the third and fourth question, Illich has posited some specific alternatives to formal and obligatory schooling. "The alternative to dependence on schools is not the use of public resources for some new device which 'makes' people learn; rather it is the creation of a new style of educational relationship between man and his environment. To foster

this style, attitudes toward growing up, the tools available for learning, and the quality and structure of daily life will have to change concurrently."[17]

Still using the school as a paradigm of a restrictive social institution, Illich proposes several procedures. In order to abolish the schools constitutionally, laws are necessary which will forbid discrimination in hiring, voting, or admission to learning centers based on previous attendance at some specified curriculum. This would not, however, exclude whatever performance tests might be necessary to determine competency. In some cases acceptance into a program might presuppose competence in another skill; competency must, however, be permanently separated from curriculum.

In addition to constitutional protection from schools, Illich has offered a plan for educational credit which might be provided to each person at birth and would then enable the person to acquire whatever skills or knowledge he wished at his own convenience. A third innovation which Illich advocates is the establishment of skill centers where a person could learn a desired skill and be judged solely on the results and not on the personnel or the process whereby this skill was acquired.

Today's schools are incompetent in skill instruction according to Illich because one skill is chained to another much as the proposals that go to Congress often have appended to them an unwanted rider; if you accept one, you must accept the other. The skills taught in schools are often connected to another unrelated and irrelevant task.

Finally, Illich proposes a learning network to take the place of schools. This network would give each person a chance to share his concerns with others who were interested in similar ideas. In an attempt to provide learners with the necessary access to reality, Illich has posited a skill exchange which would bring together those with technical excellence in some area and those who wanted to learn this proficiency. Educational objects would be made available to those who wanted to study them, peers could be matched so that they could learn from one another in a spontaneous and organic environment.

Those teachers or educational guides who were especially gifted would be more readily accessible to others who wanted to study with them.

Perhaps the most important condition which Illich describes as being necessary to a viable alternative is that compulsory attendance at school be discontinued immediately. Then, new formal procedures such as outlined here for the acquisition of skills could be allowed to develop along with a new approach to informal and spontaneous education. Man would be able to identify for himself his real and authentic needs, not those programmed into him through his schooling. "Only when a man recovers this sense of personal responsibility for what he learns and teaches can this spell be broken and the alienation of learning from living be overcome."[18]

Once the authentic desires of man are identified, a new structure for society could be created. This structure, according to Illich, would inculcate the concept of humanity, what it means to be a human, and as a human what it means to function in a responsible way. "The celebration of man's humanity through joining together in the healing expression of one's relationships with others, and one's growing acceptance of one's own nature and needs, will clearly create major confrontations with existing values and systems. The expanding dignity of each man and each human relationship must necessarily challenge existing systems."[19]

The structure of this new society would take the form of "convivial" technologies--technologies which serve man and help him fulfill himself personally while aiding him in valid relationships with other people. Convivial as defined by Illich is a ". . . technical term to designate a modern society of reasonably limited tools."[20] This definition exemplifies Illich's vigorous and abiding interest in language. The words one uses to communicate an idea are of central importance to Illich, and his own choice of words is both fastidious and creative. ("Deschooling," for example, has become an educational slogan of our time.) Illich's selection of the terms "convivial" and "tool" was by no means a random or casual one.

Both words are heavily overlaid with connotations which have no meaning whatever in Illich's linguistic vocabulary. His creative expressions demand adherence to his own interpretations if one is to understand his explanations, yet with his high degree of selectivity of word choice, he is able to endow our language with new, powerful, and original meanings. Perhaps his early and sustaining interest in alchemy, the science of meanings, has enabled him to so clearly enrich single words and phrases with such profound significance.

In English the word "tool" now denotes nothing more than a utensil, an object one might use to accomplish a specific task. Just as he has defined the parameters of meaning for "convivial," Illich has reclaimed for the word "tool" the symbolism of an object, an organization, a procedure, all of which are capable of translating the deepest perceptions of the culture in which they are employed.

The concept of a "limited tool" is significant to Illich's thesis of man's relationship to his environment. Limited here is used to denote the opposite of "unlimited" or "undefined" rather than "repressive" or "constrained." The difference is slight and highly abstract but a necessary one to discern if one is to fully comprehend Illich's illucidations. His theory is that a convivial society is possible only if certain limits are applied to industrial growth, limits that can be applied to both goods and services produced in an industrial state.

Illich has cited the mass production of education through the schools as an example of an industrial enterprise, producing a service commodity, yet organized as a public utility, and defining its output as a basic necessity. Besides schools, Illich sees professional health care and systems of public transport as examples of such industrial enterprises. All of these organizations create alienation, exploitation, and despair because they have exceeded the limits of their effectiveness.

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In the example of health care, as the value of the services rises, it becomes impossible for people to care any longer. As the per capita cost of preventive health care rises, paradoxically, the per captia cost of treatment rises also. The crisis of contemporary medicine arises Illich states, ". . . from the development of a professional complex supported and exhorted by society to provide increasingly 'better' health, and from the willingness of clients to serve as guinea pigs in this vain experiment. People have lost the right to declare themselves sick; society now accepts their claims to sickness only after certification by medical bureaucrats."[21]

Transportation as well as education have both followed this pattern of evolution, according to Illich. In the beginning, ". . . new knowledge is applied to the solution of a clearly stated problem and scientific measuring sticks are applied to account for the new efficiency. But at a second point, the progress demonstrated in a previous achievement is used as a rationale for the exploitation of society as a whole in the service of a value which is determined and constantly revised by an element of society, by one of its self-certifying professional elites."[22]

Contemporary society is viewed by Illich as heading for catastrophe and destruction because of the inability of any kind of industrial production to satisfy the ravenous needs which it creates among members of our society. This criticism is not substantially different from that of Marcuse who states that in order to survive, man must struggle ". . . against the system's ubiquitous pressure, which by means of its repressive and destructive productivity degrades everything, in an increasingly inhuman way, to the status of a commodity whose purchase and sale provide the sustenance and content of life; against the system's hypocritical morality and 'values'; and against the terror employed outside the metropolis."[23]

Illich's conclusions, however, that a convivial society can be attained through limitation which gives rise to freedom is remarkably different from Marcuse and other structuralists. In order to solve the contemporary crisis situation, Illich believes we must

learn to invert the present organizational procedure for the utilization of our tools. Instead of an increasing demand for new and more efficient products, a demand which defines the progress of society itself, modern technology must be limited to permit the emergence of a new life style, one committed to personal rather than institutionalized values. The ethical virtue to which Illich attaches the most significance, the one that is intrinsic to an authentically convivial society, is that of individual autonomy. A convivial society is one in which there is a continuous and creatively autonomous interaction among its members and between members and their environment. This individual interaction among people could then expand and allow for an enlarged contribution ". . . of autonomous individuals and primary groups to the total effectiveness of a new system of production designed to satisfy the human needs which it also determined."[24]

The structure of the tools with which man may work is crucial to Illich's theory of limitation and conviviality. The less the tools are convivial, the more teaching and instruction they require for their use. In other words, the less accessible they are to *all* people, the more manipulation and discrimination is involved in their employment. As centralization and specialization increase, the personal control over one's own lifestyle--the type of knowledge one seeks, the work one chooses to perform, etc.--decreases. "More of what each man must know is due to what another man has designed and has the power to force on him."[25] As learning becomes more and more a commodity, man's creative power to endow the world with his personal signature becomes diseased then disipated and it is finally extinguished. People, according to Illich, cannot be taught to live within limits. Their survival, indeed, is dependent upon their learning what they can *not* do.

An interesting philosophical investigation could, perhaps, be made of Illich's own theories on the nature of man himself; particularly relevant would be an examination of the epistemological viewpoint of Illich. However, that is outside the scope of this analysis, and such a study will have to wait for future consideration.

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Illich does not believe that a convivial society is a Utopia beyond acquisition. In order for it to develop, though, the use of scientific technology must be reexamined. Science can lead to specialization, centralization, and the institutionalization of values as Blake admonished, or it can increase the amount of individual competence, control, and iniative, thereby guaranteeing a satisfying and imaginative relationship between persons, tools, and a new collectivity, truly exemplifying the perspective of a multiple vision of reality.

Such a genesis could be made possible through additional research in the devising of tools and tool systems which optimize the freedom of the individual. "What we need is rational research on the dimensions within which technology can be used by concrete communities to implement their aspirations without frustrating equivalent aspirations by others."[26] This research Illich terms "counterfoil" and as such it is primarily concerned with ". . . an analysis of increasing marginal disutility and the menace of growth. It is then concerned with the discovery of general systems of institutional structure which optimize convivial production."[27]

The construction of a convivial society with convivial tools for its use demands recovery through a political process, one that employs legal and political procedures which are accessible to all who want to participate in them. People must learn to decide for themselves the amounts of resources which each can claim, the kind of health care each desires, the method and speed of transportation each will make use of, as well as the types of people one wants for friends and the location of one's residence. The erosion of personal responsibility must be halted and control over the activities of a lifetime must be reclaimed by each individual. Such a society can only be obtained, in Illich's view, through the restructuring of politics and law, through which individuals always recognizing the validity of conflicting interests, can make use of language and disciplined procedure to establish the necessary limitations--limitations on which human survival may ultimately depend.

The de-schooling notion, then, is a central and, on Illich's view, a necessary component in a larger social vision. That vision is of a society of confederated individuals, generating their own needs and activities and developing legal and institutional structures to satisfy those needs and conduct those activities. De-schooling is neither an end-in-itself nor a merely educational strategy. It is one of many instruments for the attainment of a richer and more successful society.

NOTES: CHAPTER VIII

1. Ivan Illich, *Deschooling Society* (New York: Harper and Row, 1971), p. 38.

2. *Ibid.*, p. 26.

3. Ivan Illich, "Ivan Illich Challenges Education," a tape, Argus Communications, 3505 No. Ashland, Chicago, Illinois.

4. *Ibid.*

5. Herbert Marcuse, *One Dimensional Man* (Boston: Beacon Press, 1968), p. 70.

6. "Illich Challenges Education," *op. cit.*

7. Theodore Roszak, *Where the Wasteland Ends* (Garden City: Doubleday and Co., 1972), p. 419.

8. *Deschooling Society, op. cit.*, p. 37.

9. Ivan Illich, "Why We Must Abolish Schooling," *New York Review of Books*, XV(1) (July 2, 1970), 12.

10. *Deschooling Society, op. cit.*, p. 37.

11. Ivan Illich, "The Alternative to Schooling," *Saturday Review*, LIV (June 19, 1971), 44.

12. *Ibid.*, p. 48.

13. *Ibid.*

14. "Illich Challenges Education," *op. cit.*

15. "The Alternative to Schooling," *op. cit.*, p. 48.

16. Eric Fromm, *The Revolution of Hope* (New York: Harper and Row, 1968), p. 63.

17. Ivan Illich, "Education Without School: How It Can Be Done," *New York Review of Books*, XV(1) (January 7, 1971), 25.

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18. "The Alternative to Schooling," *op. cit.*, p. 48.

19. Ivan Illich, *Celebration of Awareness: A Call for Institutional Revolution* (Garden City: Doubleday and Co., 1970), p. 19.

20. Ivan Illich, *Tools for Conviviality* (New York: Harper and Row, 1973), p. xxiv.

21. *Ibid.*, p. 6.

22. *Ibid.*, p. 7.

23. Herbert Marcuse, *Five Lectures* (Boston: Beacon Press, 1970), p. 86.

24. *Tools for Conviviality, op. cit.*, p. 10.

25. *Ibid.*, p. 58.

26. *Ibid.*, p. 78.

27. *Ibid.*, p. 82.

CHAPTER IX

PAULO FRIERE AND THE PROBLEM OF CONSCIOUSNESS*

A recurrent problem for the study and planning of social change is that of consciousness. Social change is intimately associated with change in the ways in which those involved in the change perceive and conceptualize the world. In general, the strategic problem, whether in research or policy making, lies in the choice of whether to give priority to consciousness (or, in the terms used in the detailed analysis of the problem given earlier in this volume, to "ideology") or to take consciousness as a dependent variable, subject to alteration through the alteration of material and social structural conditions. The issue is that of choosing a point at which to break into the circle of consciousness--social structure--material conditions--the sort of circle that is implicit in lines of analysis like this familiar one: peasants are poor and have little margin for experimentation and innovation. Because they cannot afford to risk innovation they remain poor. Because they are poor they are suspicious of outsiders. Because of their suspicions they are reluctant to trust outside innovators and, because they do not accept innovators they remain poor. And so on and on and on. One can try to break into this deadly circle at several points. Goodman, for example, finds interventions at the point of the ecological conditions of life a fruitful entry, while McLuhan is attracted to intervention at the point of technological forms. In the work of Paulo Friere, the subject of these remarks, we find an advocacy of a direct attack on the problem of consciousness--social, economic and political change are interpreted as the consequence of consciousness and, thus, the problem of social change is the problem of "raising" and altering consciousness.

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*By Francis A. Guldbrandsen

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Paulo Friere brings to the *Pedagogy of the Oppressed* a set of assumptions that probably many people dealing in non-formal education are not prepared to make. Nevertheless, the case he builds for looking at the world in terms of "oppressors" and "oppressed" certainly holds a good deal of credibility, and certainly would have great effects for any who wish to build some programs of non-formal education hoping to benefit either the Third World or the rural populations of the first and second worlds.

Friere sees non-formal education as a tool toward the freeing of the oppressed. He does not see it as a device that can be used to make the oppressed happier with their lot. "Conditions aren't any better, but at least now we can read." He sees that it is very much in the interest of the oppressors to keep the oppressed from becoming educated, conscious, aware. The oppressed, if conscious of their oppression, pose a very grave threat to the power of the oppressors. The oppressors cannot stand for that, and so will never make a serious effort to educate the oppressed.

Friere sees himself in the consciousness raising business and defines the raising of consciousness as intrinsically a political act. Perhaps, partially because of the setting (South America) when those to be educated are educated they will make some fundamental changes in the political system, Friere thinks. Education, for Friere, does not teach the peasants how to fit into the society that awaits them, it does not teach them how to accept their fate as peasants; rather it teaches them how to change their fate and make it a better one. The way peasants can begin to make changes in their lives is through *conscientizacao*. Conscientizacao refers to "learning to perceive social, political, and economic contradictions, and to take action against the oppressive elements of reality."[1] But conscientizacao presents many real and fantasized threats to the oppressed. The oppressed live with the constant fear of freedom. They have internalized the conscience of the oppressors, and they have come to see critical consciousness as a threat to all order, to the way things are divinely ordained. It takes a great deal of dialogue to help alleviate those many fears, to allow the oppressed to see the vision that to be human, to be a Subject, means to be critical.

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The method of education for the oppressed is dialogue. The method of education most often used by the oppressors is called the "banking concept of education." In the banking concept of education there is a depositor and several depositees (depositories). The depositor is the one who knows all, is the one who does the talking, is the one who does the checking up, is the one who has all the power. In other words, the banking concept of education is what is known to go on world wide in most formal classroom situations. No matter how beneficient are those who wish to educate the oppressed, if they use the banking concept of education, they only further the oppression. Dialogue, if it is true dialogue, cannot be engaged in without helping to free the oppressed. The very nature of dialogue is intrinsically consciousness raising. Dialogue means speaking and listening critically, weighing what is said against one's own and the other's experiences. As it takes place in good faith it raises the consciousness of the dyad, triad, or multiad. Speaking is only one part of dialogue. An equally critical part is the listening. In the banking method of education, the educator does all the speaking and none of the listening while the educatee does all of the listening and none of the speaking. Besides being ineffective in itself as a method of consciousness raising, it is in substance dehumanizing. In the banking method one member is the subject and the other the object. In the dialogic method, both members retain their subject status. To be objectified is to be dehumanized.

Many times well meaning educators want to break up into small group discussions with students and "relate." They have heard that it is the latest pedagogical technique, and that it is a good thing to do. However, it is only a good thing to do, they think, as long as the material is covered in the proper amount of time so that the lesson plan can be followed. This kind of mentality, no matter how well meaning, only serves to oppress. It is obvious that these teachers are putting the material before the students. The material is seen as the important constant and the students are the manipulable variables. The material has its own timetable, the students' organismic

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timetable is more flexible. This is education in bad faith. It only serves to oppress.

True dialogue involves meeting the other at the core of his being, it means to "encounter" the other, in the Buberian sense.[2] There can be no hidden agenda where real dialogue takes place. This does not mean that dialogue is only whimsical talk, a kind of free floating drivel about whatever happens to come to mind. It means that each party must see the other as subject, worthy of respect, worthy of being heard. True concerns must be listened to.

Very often the oppressed do not see themselves as worthwhile, as subjects. The nature of oppression includes a kind of worthless-ness feeling for all who are under it. Nevertheless that must be worked through if education is going to be liberating.

> *They call themselves ignorant and say the "professor" is the one who has knowledge and to whom they should listen. The criteria of knowledge imposed upon them are the conventional ones. "Why don't you," said a peasant participating in a culture circle, "explain the pictures first? That way it'll take less time and won't give us a headache."*[3]

In the banking concept of education, what is being "covered" is always more important than who is doing the covering. Most often the teacher covers the material for a pre-ordained number of hours, then the students cover the material by way of testing of some variety. It is assumed that the material being covered, once covered will be of some benefit to the coverees. Sometimes the benefit is only for discipline purposes or "it helps them to think," most often said of Latin.

The students, of course, being mostly ignorant do not have a very good or realistic idea of what they should learn: that is the domain of the curriculum experts. Even literacy training, if the oppressed see no felt need for it, serves the oppressors.

> *For the anti-dialogical banking educator, the question of content simply concerns the program about which he will discourse to his students; and he answers his own question, by organizing his own program. For the dialogical, problem-posing teacher-student, the program content of education is*

> *neither a gift nor an imposition--bits of information to be deposited in the students--but rather the organized, systematized, and developed "re-presentation" to individuals of the things about which they want to know more.*[4]

As Chairman Mao put it, ". . . we must teach the masses clearly what we have received from them confusedly." The teachers must go to the people and find out what the objective situation is, and they must also find out what the oppressed see their situation as. The two situations might be very different. One's perception of oneself and then one's self perception perceiving a situation outside oneself is often very different from someone else's perception of that "same" situation.

The educator may see the situation in one set of terms, and the oppressed may view the situation in another set of terms, and the objective situation in itself may be a third reality best described in terms not used by the oppressed or their would-be educators. Dialogics, dialogue between the student-teachers and their teacher-students, is the best way to adjudicate the differences.

Friere's method of consciousness raising has been tried and tested and found to have effect in South American countries. In fact the effect has been so great that Friere no longer lives in his homeland, but has gone to Switzerland to work with the World Council of Churches as head of the Education Division. Consciousness raising, for Friere, is a political act. When the oppressed become more aware of themselves and their environment, Friere thinks they are going to want to change it. The power elites often have it in mind to keep things pretty much the same tomorrow as they are today. It is obvious then why Friere and his method of dialogics would be banned.

Whether consciousness raising is always primarily a political act might well depend at least in part on how the term "political" is to be defined. There are those who argue that the raising of consciousness is primarily a personal discovery action. Some of these are found in the human potential growth movement. However the terms come to be defined and the work load partialled out, there is without any doubt a good deal to be done in the area of consciousness raising among the oppressed of the earth.

NOTES: CHAPTER IX

1. Paulo Friere, *Pedagogy of the Oppressed* (New York: Herder and Herder, 1970), p. 19.

2. See Martin Buber, *I and Thou*.

3. *The Pedagogy of the Oppressed*, pp. 49-50.

4. *Ibid*.

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CHAPTER X

THREE GENERALIZATIONS

These comments do not represent a compilation of the many ideas presented in this volume. Those ideas are, perhaps, too diverse to summarize neatly and, at any rate, deserve consideration within the context in which they are developed. Instead, in this concluding chapter, I would like to present--briefly--a few notions, expressed at a high level of generality, that emerged as recurrent and significant themes during the progress of the historical study. They are not, to be sure, findings in which absolute confidence can be vested and some of them are certain to be regarded as at least controversial. No apology is made for that, since they seem to us to have a clear burden of historical support and to be important to scholars and planners of non-formal education. These few findings, while by no means novel, are, in part, a consequence of examining educational history from the expanded vantage provided by the concept of non-formal education. That vantage makes possible, even necessitates, the consideration of questions and distinctions that can be pretty much ignored in institutional analyses of educational history. Earlier in this volume it was argued that the concept of non-formal education has a substantial "explosive power" for the business of thinking about education. Hopefully, these closing remarks are a manifestation of that conceptual contribution.

Education and Change

A continuing problem for scholars and educators is that of the relationship between educational measures and practices and the more general process of social--especially economic and political--

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change. One dimension of that problem is the question of whether, in general, educational arrangements are a cause or an effect of social change--are they consequent or subsequent. While it is difficult to place historical events in any neat causal framework since, once a process of change is begun there is a continuing and complex interplay between all of its elements, it is the conclusion of the investigations conducted under the rubric of historical studies that, *for the most part, educational arrangements follow from, and do not generate, changes in the material conditions of life*. This is a reassertion of the materialist conclusions reached in an earlier chapter, but is, as well, rooted in the analyses throughout the volume. When we find instances of social change, of economic redistribution and political alteration we almost invariably find basic changes in the shape and texture of educational arrangements. On the other hand, we can find numerous instances of at least marginal change along the educational dimension with little or no concommitant change in social arrangements. (There are, to be sure, exceptions to this. My colleague, Professor Kleis, has, on several occasions, called to my attention the role of Agricultural Extension in securing change in the rural sector of the US.) This is, of course, contrary to a great deal of the widely held mythology of education as a causative agent in social change. It may be that, when viewed in terms of return on investment, our evaluations of the return, in terms of social change, on educational investment, are so often depressing. Certainly it is also due to the fact that educational decisions are, almost always, politically taken and reflect the ethos and purposes of political rulers (who, in addition, are usually economic rulers). I suspect, too (and probably most important), that it is because consciousness is a product of social, economic and political arrangements and will not yield to much independent manipulation.

Whatever the cause of the dependent status of education as one arena of social practice, its dependency has considerable significance for planning. We are often confronted with some fairly

clear developmental social imperative--raise the standard of living, broaden political participation, increase productivity and so on--but a number of possible strategies for its pursuit. We might, for a simple example, have to choose between extension of the franchise and raising the level of political literacy as strategies for widening political participation. Given such choices, the generally reactive character of education would make it appear most fruitful to choose the strategy situated closest to the material conditions--in this case, the extension of the franchise.

The Persistence of Forms

This is a somewhat difficult point to make, since it turns upon a fairly easily confounded distinction between "form" and "content." It is, however, sufficiently important to justify the effort to sketch out the distinction and its implications. Quite simply, by "form," I mean the sets of relationships that hold between the various components of an object or an event. "Content," on the other hand, is what is "contained" in the object or event. In a social group, the form is constituted by the relationships of role and function that describe the structure of the group, while the activity of the group constitutes its content. At a very simplistic level, a kettle is form, what is cooked in it is content. In education, we often refer to what is here called "form" by the name, "method." One of the most cherished goals of educators has been to generalize method, to abstract it and to develop universal methods applicable to any desired content. That effort requires, as a basic assumption, that method is, at least theoretically, neutral, or amenable to being made neutral. If so, then content can be placed in a methodological frame without being distorted or imposed upon *by* the method. The search for a general method has been, in an important way, supported by the identification of education and schooling, since schooling is, within bounds, a rather universal and consistent form. When, however, one expands the construction of education to include the non-formal (and the informal) contexts of

education, it becomes possible to make comparisons between contents that are, at least in their linguistic formulations, highly similar, but treated in different methods. Such comparisons yield the conclusion that method shapes, in significant ways, what happens to a particular content. To select a method--a form or a location--for some particular educational endeavor is to apply constraints, to measure in significant ways, what will happen to the content of that effort. To choose a radio forum over a worker's community meeting as a vehicle for health education is to determine, in some ways, what the character of the health education will be. One might expect, for example, that the radio medium might result in education with a high information loading, while the community meeting might result in a more inquiring and affective alignment of activity. The impact and consequences of educational form on content needs to be just as careful and as high a priority judgment as the conventional ones of economy, efficiency and the like. *Methodological forms have great persistence and formative power and are not mere or neutral models that can be adapted to just any set of content goals.* We need to select our educational forms at least as carefully and with as much awareness of how they shape their content as a good cook selects his pots.

Schooling

In almost every historical instance, schooling is an instrument of groups that enjoy a position of power and privilege. It functions to support and further the interests of ruling classes in a great many ways--by socialization of the young, by providing an access route to those who aspire to power themselves, by closing out options for opponents. *Schooling, as a form of education, is a conservative force in regard to its alignment with ruling class interests.* This is true whether political and economic forces that control schooling are themselves progressive or reactionary. *Educational concommitants of movements and developments that are contrary to or outside the scope of interest of power elites are,*

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on the other hand, usually non-formal or informal in character. (Indeed, there are numerous instances in which ruling groups have expanded their interest to include a concern from some previously ignored dimension of activity--vocational education is a frequent example. The result, in most cases, has been the design and adoption of a plan of schooling.) This notion should sharpen and condition the way in which we make selections among educational possibilities.

These, then, seem to us to be the three strongest currents in the stream of educational history that are clearly exposed by and significant for the concept of non-formal education: the reactive character of education, the persistence and formative force of educational forms and the conservative character of schooling. If we are right in their presentation and defense, then they would assuredly seem to merit a place in any careful deliberation about educational measures.